THE RUBBER AGE

ESTABLISHED 1917

COVERS ALL PHASES OF THE PRODUCTION AND MARKETING OF CRUDE RUBBER AND THE MANUFACTURE AND DISTRIBUTION OF RUBBER GOODS

Vol. 33 JULY, 1933 No. 4

INDEX TO CONTENTS

The Public Is Ready for Better Smelling Raincoats 153
By Donald A. Laird

Commodity Exchange Operates in New Quarters 155

Trend of Latex Equipment Development 157
By George D. Kratz

Descriptions of New and Improved Rubber Machinery and Equipment 158-161

Screw Micrometer Gage for Rubber Specimens 161

Transparent Dipped Rubber Goods 161

Preparation and Crystallization of Pure Ether Soluble Rubber Hydrocarbon 162

Market for Rubber Toy Balloons in Belgium 162

Swedish Tariff Rates 162

REGULAR DEPARTMENTS

Late Domestic News 164
Personals 168
New Goods 169
Rubber, Cotton Markets 171
Chemical Markets 172
Obituaries 167
Editorials 163
Financial News 166
Statistics 173
Market Place 177
Advertising Index 181
Classified Ads 180

THE RUBBER AGE, published on the 15th of each month by the Palmerton Publishing Company, Inc., at 1-3 Peace Street, New Brunswick, N. J. Editorial and Advertising offices at 250 West 57th Street, New York City. Established 1917.

Entered as Second Class Matter, August 24, 1927, at the Post Office at New Brunswick, N. J., under Act of March 3, 1879.

Subscription Rates: Domestic, $2.00 a year; Canada, $3.00; Foreign, $3.00. Single copies, up to 3 months old, 25 cents; over 3 months old, 50 cents.

Telephone: COlumbus 5-2923, 5-2924.

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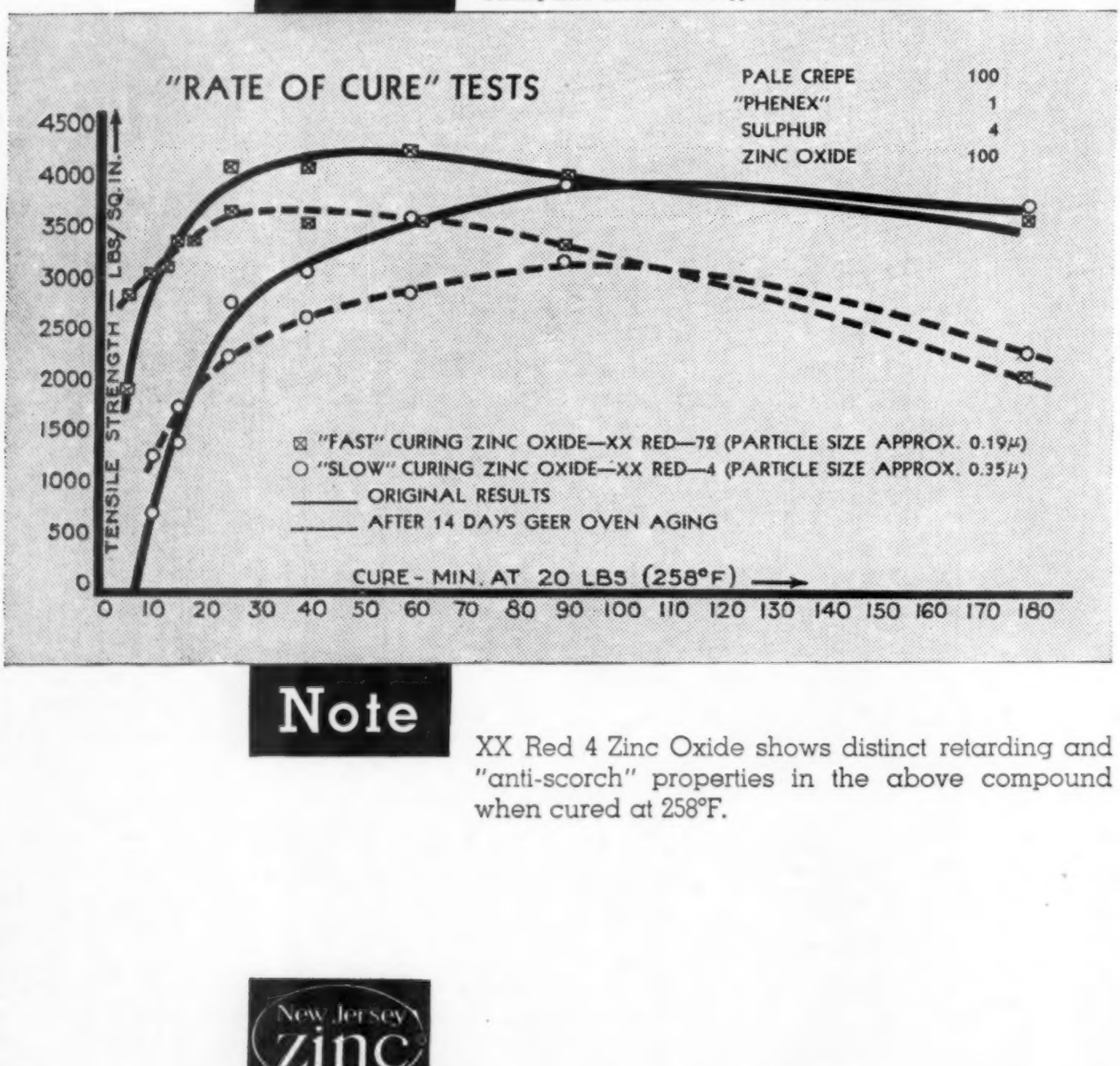

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New Jersey Zinc

THE NEW JERSEY ZINC COMPANY 160 FRONT STREET NEW YORK

THE RUBBER AGE
Published Monthly at 1 Peace St., New Brunswick, N. J.
Editorial and Advertising Offices: 250 W. 57th St., New York

Vol. 33 JULY, 1933 No. 4

The Public Is Ready for Better Smelling Rubber Raincoats

According to a Survey Among the Retail Trade in the New York District Made By

DONALD A. LAIRD
Director, Colgate University Psychological Laboratory, Hamilton, N. Y.

WHEN you went into your favorite shop to buy your rubber raincoat this spring, did you note the "rubber odor" that emanated from the garments? Or, being a manufacturer or worker in rubber, and so accustomed to the odor, did you miss the acrid, repulsive smell altogether?

Here is a question of vital importance to the rubber industry because, whether manufacturers and rubber workers are or are not accustomed to rubber odor, the retail buying public is not, and particularly in the raincoat field it is costing the dealers and manufacturers a pretty penny. A "penny," in fact that probably runs into hundreds of thousands a year! And one that the manufacturers could pick up, to put it figuratively but as this article will amply prove by its facts mighty effectively, almost without stooping over.

Now the main fact is this: A recently completed survey of the opinion of retail shop and store buyers in New York City from the palatial emporiums on Fifth Avenue to little shops on the lower East Side demonstrated beyond doubt that the manufacturers who go heartily into the business of deodorizing or reodorizing their rubber raincoats will reap a truly golden harvest.

In other words, the buyers were practically unanimous in the conviction that rubber odor in rubber raincoats was seriously affecting sales volume. And just how seriously is best shown by the fact that estimates of increased business believed possible if rubber odor were eliminated from raincoats varied from 15 per cent in the best grades, to 60 or 70 per cent in the cheaper grades, to say nothing of one qualified estimate of 80 per cent wherein the buyer conditioned her prediction upon there being certain special advertising.

Arresting as the facts and lessons of this survey, in the opinion of the writer, should be to the raincoat makers, it seems just as clear that they have a deep and dollar-luring significance for the whole industry. For, if rubber odor swings prospective raincoat buyers from rubber to leather or wool or umbrellas, who can deny that it must equally repel prospective buyers of shower bath curtains, mats, table coverings, cups, coasters, or other products? That it will and does is proved not only by the survey statistics about to be discussed herein but also by the fact that many important makers of rubber products already are using synthetic aromatics to give their goods a good clean smell—in a word, to simply eliminate "rubber odor"—or to supplant the natural new rubber smell with one or the other of the almost countless variety of lasting and alluringly fragrant odors that synthetic aromatics are now able to impart to any manufactured article at a nominal cost when compared to consequent profits. Incidentally, it is known in the raincoat field that certain manufacturers have already—or are just about to go in for reodorized raincoats.

All things considered this is a most logical step, and that being so it is equally logical to consider just what reward awaits the first firms in the field—the enterprising first fellows to offer a raincoat of fine smelling fabric.

Well, consider the testimony of the buyer in one of the largest of the Fifth Avenue retail stores—one that has

catered successfully for years to the highest class trade. This firm did not buy any of the cheaper grades of raincoats because of their odor; there was no demand for them, that was, from the store's clientele which again, so the buyer thought, was due to the rubber odor. He opined that rubberized silk would be very popular if it were deodorized or reodorized instead of lacquered because the lacquer after a time was sure to crack and so permit to escape the rubber odor it originally imprisoned. But the important point of his talk was this: He believed a good deodorized or reodorized American made raincoat would cut the sale of foreign brands—in which his firm specialized—as much as 40 per cent. Which certainly is a block of business worth anyone's time and trouble.

Estimates of increase in sales of rubber raincoats if the coats were stenchless were equally promising. All the buyers said that some increase might be expected, and what was more every last one was eager to say he would welcome such a coat. "If properly done," was the judicious observation of the elderly and experienced buyer in another of New York famous retail establishments, "the increased sales of the cheaper grades would be 60 to 70 per cent, of medium priced goods about 25 per cent, and of the best quality from 10 to 15 per cent. In a store whose clientele was of a more diversified type, the buyer asserted that cheaper grades were by far the best sellers and that the percentage of sales if the coats were deodorized would be "very, very great."

Another buyer, in a thriving emporium up on West 125th Street, ardently praised English raincoats because for some reason he could not understand why, they had less rubber odor than American makes and said that if the moderately repulsive native rubber smell could be eliminated from the present American-made coats without change in price, sales would jump at least 50 per cent. The buyer in a store of world-wide repute in the trade, stated dogmatically that a rubber raincoat with a satisfactory odor which would last as long as the garment itself would without doubt "quadruple sales," and if "the public's present disgust with product smells continues to grow" would even better that figure.

Equally emphatic was the woman buyer in a low price, quick turnover store on lower Broadway who declared, "If raincoats were reodorized sales of such goods would increase 30 per cent, and with certain advertising 80 per cent."

Rubber Odors Have Caused Revolt

Nor do the figures and estimates of sales increase tell the whole story. On the contrary, the survey revealed that rubber odor has aroused, among buyers and customers as well, a revolt which has reached in many instances an emotional state. Which, it might be said from a sound psychological viewpoint, indicates that the time is ripe for the introduction of good smelling rubber raincoats; that the psychological moment has arrived. For instance, one buyer of long and varied experience declared that "unless something was done immediately rubber raincoats would go out of the trade just as rubber boots had done." He could not recall a time when he did not have complaints about evil smelling rubber raincoats on hand; indeed, he felt that this question of smell was second only to price in the mind of the average prospective raincoat purchaser.

And the woman buyer of a well known store in Brooklyn related how staunch a struggle the establishment had put up against rubber odor. She talked in the presence of a higher official and there was intimation that only that day or week a customer particularly wrought up over an offensive smelling rubber raincoat had been finally satisfied. She told how, when raincoats were first received at the store

they were aired in an open space for several days before being placed on display. This helped some, but was by no means satisfactory since after another few days the odor always came back.

"You come to us for our opinion on deodorized raincoats as the representative of a manufacturer," exclaimed the quick spoken buyer in an upper Fifth Avenue establishment. "We say, it's time you rubber manufacturers woke up. You have the right foot forward. Good luck and good day."

Blames Smell for Loss of Sales

Fully as forthright, if more loquacious, was the genial buyer for an equally well known department store further downtown on the West Side. He was glad there was one manufacturer who realized that if he was to sell raincoats he must overcome "that disagreeable smell," and he added, significantly, that sales in the raincoat line had been very bad since a year ago last August. What was more he seemed to give the combination of smell and the growing public dislike for it more blame for this situation than he did the well known depression.

Even the busy, taciturn buyer of the well patronized shop on Fourth Avenue, just above Fourteenth Street, visited early in the survey, said with grim promptness, "deodorized raincoats—if the price is right we'll sell 'em all right." And over on Broadway a woman buyer invited the investigator to put her on the trail of a deodorized or reodorized coat, saying without hesitation she would buy them in preference to other grades if there was no great increase in price.

As to whether simple killing of the rubber odor or substitution for it of a perfumed or other positive odor was the better policy for the rubber manufacturer, there was, curiously, no such agreement among the buyers as there was on the other points covered, and a variety of interesting ideas were brought out, showing again, incidentally, what a considerable amount of thinking the New York buyers have been doing about the matter. Yet, if a majority opinion were to be sought, there is not much doubt that it would favor simply a good clean smell, rather than a perfume or markedly artificial scent. The Brooklyn store buyer told of above might be said to have put the prevailing ideas aptly with his own coined word—a "newsome" odor.

Still, there was, obviously, much to be said on the other side. There was, for instance, the opinion of the woman buyer in the big Fifth Avenue shop who thought that it would be very nice if the raincoats could be scented—Jasmine for women and girls and Carnation Rose for men.

Then, there was the thoughtful man who held that what-

(*Continued on Page* 162)

Pach Bros.

Scene at the Rubber Trading Ring on the Opening Day of the Merged Exchanges

Commodity Exchange Operates In New Quarters

ALTHOUGH the Commodity Exchange, Inc., has formally been in effect since May 1, the actual merger under one roof did not take place until Wednesday, July 5, at 9:45 A. M. when the new quarters were opened at 81 Broad Street, New York City. The Commodity Exchange, Inc. is a merger of the Rubber Exchange, N. Y. Hide Exchange, National Metal Exchange and the National Raw Silk Exchange. Elaborate ceremonies marked the opening when President Jerome Lewine put the trading rings officially in operation.

Richard Whitney, President of the New York Stock Exchange, speaking extemporaneously, told the assembled members and guests that the Commodity Exchange could rely upon the complete cooperation and advice of the New York Stock Exchange, that it filled a definite need in the field of business and that the two exchanges would be happy to work together in behalf of "decent business." He felicitated the Commodity Exchange membership on their achievement of a consolidated market and declared the present a most propitious time for the opening of the new market.

Mr. Lewine, in declaring the exchange officially open, said:

"In opening this Exchange for trading we are both carrying on and beginning. We are carrying on the activities of the four exchanges which have joined to form this central market. We are carrying on markets which had their inception in the heyday of prosperity; which have passed through one of the most troublous periods the business world has known and which are emerging now in the clear light of a better day.

"But this formal opening signifies more than a joinder of physical facilities, great as are the conveniences which that accomplishment alone must afford to all members of the Exchange and to all who utilize the several markets. In merging the four markets into one, we are but taking the first step in preparation for a period of greater activity, of greater opportunity and of wider service to commerce and industry.

"I welcome you, in behalf of Commodity Exchange, to the opening of a growing market. It is a growing market because the commodities which are represented on this floor have experienced an extraordinary growth in their use in the past and because, with a return to the normal in business, that growth, momentarily interrupted, must continue. The eye, when it looks on the Exchange floor, sees its physical structure and its most active market as it is—a great nerve centre of business. Commodity Exchange, today, takes rank as one of the foremost commodity exchanges of the world.

"On this floor will converge influences which arise in such remote parts as the East Indies, Japan and the Straits Settlements—our Western plains and those of the Argentine—the mining districts of this continent and of South America.

"Our Exchange, it is hoped, will increase in usefulness to business and in service to the nation. We are large producers of some of the commodities traded in on this floor. We are the largest consumer of those commodities which are produced outside our borders. The facilities offered by Commodity Exchange have a value at every state of the business cycle for those who would make the intelligent

Blackstone Studios

JEROME LEWINE

President of Commodity Exchange, Inc.

anticipation of the day an immediate accomplishment. At every state of the cycle they have a value for those who would insure against one of the most hazardous of all business risks.

"Part of the work of making this a useful and efficient market was accomplished years ago when the constituent exchanges were formed. Part of that work had been done laboriously through the many months when the most minute details of organization and operation were being worked out. The thanks of the Exchange must go to those who devoted their time and thought to this work of building. In this conjunction, I would like to mention the names of a few of those members who have done such excellent and unselfish work: J. Chester Cuppia, Floyd Y. Keeler, John L. Julian, Harold L. Bache, Charles Slaughter, William E. Bruyn, Paolino Gerli, Charles Muller, Frank W. Lovatt, Edward L. McKendrew, I. Henry Hirsch, Addison B. Hall, Irving J. Louis and Martin H. Wehncke.

"Even with all these efforts we could not have accomplished the desired merger without the untiring and intelligent assistance and guidance of our able counsel, Mr. Julius B. Baer. I tender my thanks to these members and to Mr. Baer for their cooperation in bringing about this merger.

"We are setting in motion the machine which has been constructed, confident of its ability to work smoothly, to withstand stress and to fulfill a useful destiny."

The merger of these exchanges into a single unit had been talked about for several years but it was not until about four years ago that discussions were held between officials of the separate exchanges looking towards the formation of a commodity exchange. Prominent in the negotiations which have led up to the present merger have been the rubber exchange executives, Mr. F. R. Henderson, the first president, Mr. J. L. Julian and Charles Slaughter, succeeding presidents, and Mr. Julius Baer, co-author of "Commodity Exchanges" and foremost legal authority on such exchanges.

The present officers are: President, Jerome Lewine; Vice-Presidents, J. Chester Cuppia, Paolina Gerli, E. L. McKendrew, Ivan Reitler and Charles Slaughter; Treasurer, F. Y. Keeler; Secretary, Walter Dutton.

Membership is limited to 1015, and can only be acquired by purchase. It is pointed out that the individual memberships of the four exchanges were valued at a total of about $30,000 on the basis of their maximum value previous to the merger, with the price of individual memberships quoted around $900 on May 1st and a high of $3,900 each since that date.

A single fast ticker system, combining the quotations formerly transmitted from the four separate exchanges on four separate ticker systems, has been installed by the Western Union Telegraph Company. It was placed in operation with the opening of the commodity exchange. In place of manual self-winding ticker operation, which in the past has distributed quotations from the four exchanges at about 200 characters per minute, there will be rapid, central automatic, transmission at a speed of 300 characters per minute. The familiar, glass-domed tickers will be speeded up to be used in the new commodity ticker service.

The various trading rings on the floor of the new exchange, dealing in silver, tin, copper, rubber, silk and hides, are connected with the central ticker transmission point on the floor of the exchange by an especially designed fast belt conveyor system. This belt system insures the immediate handling of quotations from each ring to the ticker transmitter. The great speed of the belt will cut the time between the transaction on the floor and the appearance of the quotation in brokers' offices to a matter of split seconds.

According to Julius Baer, of Baer & Marks, Counsel to the Exchange, there are four main advantages which have been gained by the merger. First, the greater ease and efficiency in trading made possible by unified operation; second, a broader market created for the commodities dealt in; third, a single membership permits trading in all four markets; fourth, greater flexibility afforded by housing several trading rings and posts under one roof.

Outlook for Rubber

A review of the rubber market and the operation of the merged exchanges is made by Clifford C. Johnson of the Johnson Rubber Co., in the special Commodity Supplement of the July 3rd *Journal of Commerce*. In this article Mr. Johnson reviewed the origin of the rubber exchange on February 15, 1926, and gave a brief history of that exchange up to the time of the merger. Regarding the outlook for rubber he stated that it was "promising." He said that rubber at present prices permit only the largest estates to operate without loss but the large majority of producers cannot operate at present prices if allowances are made for depreciation and interest. Mr. Johnson added that up to 1932 the United States consumed over 50% of the world's rubber but since that time, due to the depression and to the establishment of foreign plants by American rubber manufacturers, the percentage has fallen below 50%. Some countries showed an average increase of 25% in rubber consumption during 1932 over 1931. However, if the present U. S. consumption rate continues for the next twelve months, the percentage for this country will again exceed 50%, and world's consumption will total over 700,000 tons and the world's stocks would be decreased to an equivalent of less than ten months' supply.

RE-EQUIP NOW SECTION

The Trend of Latex Equipment Development

Although Some Existing Equipment is Suitable for Latex, Market is Ready for Special Latex Machines

By GEORGE D. KRATZ*

POSSIBLY one of the reasons for the widespread interest in the use and application of rubber latex is in the fact that in many instances it has been found to lend itself well for use on existing machines. The opportunity to apply a new substance and obtain hitherto unobtainable effects without a cash expenditure naturally appealed to many manufacturers.

In the textile industry latex solutions can be readily substituted for rubber cements in the tanks of most spreading machines. A better impregnation is thus obtained and the fire hazard is entirely eliminated. The same is true with textile coating machines where latex pastes or very heavy solutions are employed.

In the paper industry, latex coatings have been successfully applied on an inclined bed coating machine, simply substituting the latex solution for the coating previously employed. Kraft paper has been successfully laminated by substituting a latex adhesive in the tank of an ordinary asphalt machine, making the run without the application of heat. Latex coatings have also been applied to paper board, directly on the board machine, by use of a simple attachment.

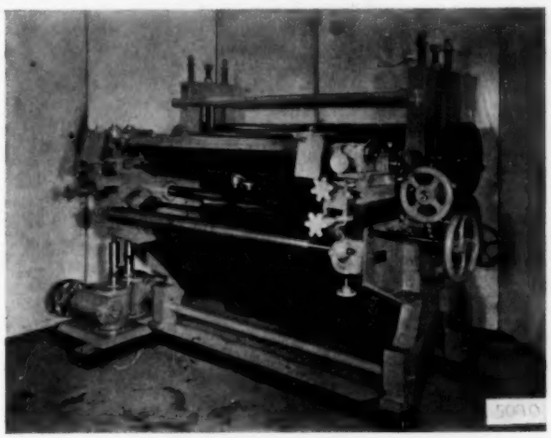
In the manufacture of twines and cordage latex may be in some instances employed directly in the size box of the polishing machine. In those cases, where waterproofing effects are the chief consideration, it may be employed alone. In other instances it may be combined with the starch or whatever other substance may be employed to impart the desired characteristics to the final product.

It is not to be assumed, however, that in each of the above instances the results obtained represent all that is to be desired or to approximate maximum efficiency. They have been, of necessity, largely makeshift methods until the value of this new material had been to a certain extent demonstrated and until the general economic situation adjusted itself so that the manufacturer could seriously consider the purchase of new equipment.

For example, in the coating of paper with latex solutions, many existing machines are not available on account of inadequate drying facilities. Where the machine is equipped with festoon driers, the solution may be readily applied. Many types of asphalt machines are not, however, equipped with festoon driers, but simply fitted with two large drying cans or cylinders. This permits running laminated stock with latex adhesives, but hardly allows coating one side only, as the wet surface comes in direct contact with the second drying cylinder before it is properly dried. The same is true in the case of many of the machines usually employed in the waxing of paper. In this instance there is practically no drying capacity and the machine is not suitable for latex solutions.

Similar objections exist in the application of latex solutions to twines, and other types of cordage. The solutions cannot always be applied at the desired point in the operation. In other instances, where vulcanization is required, this must be carried on as a supplementary operation.

In the dipped goods field latex solutions appeared at first to offer a direct substitution for the rubber cements



Reverse Coating Machine

Used for laying perfect surface finishes. The reverse roll principle actually casts the desired finished surface on the base material. These machines are built in various designs to meet different requirements. (John Waldron Corp., New Brunswick, N. J.)

*Consulting Rubber Chemist, 50 Church St., New York City.

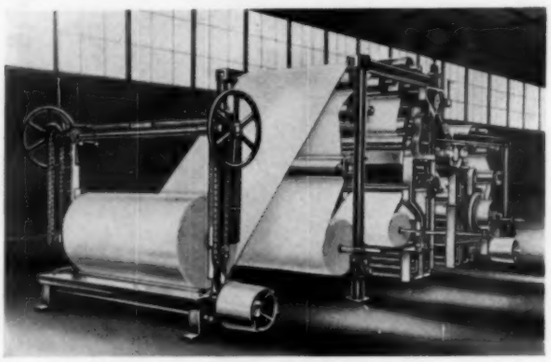
previously employed. It was found, however, that the transition from cements to latex solutions was not as simple as it first appeared. The pigments, colors, vulcanizing ingredients, etc., must be in an extremely fine state of division to eliminate a tendency to settle out on standing. Even with the most carefully prepared solutions it has been necessary to devise special agitating devices for the latex solution tanks.

One of the reasons for this is due to the fact that latex solutions of a relatively high rubber concentration have a much lower viscosity than rubber cements. A latex solution of 38% rubber concentration has but a slightly higher viscosity constant than that of water itself. A solution of rubber in naphtha, however, is infinitely thicker than naphtha alone. Naturally, the tendency of solids to settle in latex solutions is much greater than in the case of rubber cements.

Another difference between latex solutions and rubber cements is found in their inability to withstand agitation. A rubber cement improves with agitation—up to a certain point—whereas quite the reverse is true with latex solutions. The latter are usually prone to thicken or coagulate with too much stirring. Under certain conditions they are almost sure to do so. Friction at the side wall of the container, in the bearings of the agitator, or, in fact, at any place below the surface of the latex solution, may eventually cause coagulation, poor product, and the loss of the solution in the tank.

The above is mentioned simply to point out that in the designing of equipment or machinery for the processing of latex, certain points must be taken into consideration, which have hitherto not been necessary or have remained unnoticed.

In the manufacture of dipped goods, whatever has been done so far to substitute latex solutions for rubber cements —and this is only the beginning—is chiefly due to the ingenuity of the individual manufacturer. He has his own processes which he has largely worked out for himself. There are at present no sources of supply from which he can obtain the necessary equipment which will permit expansion without disclosing the results of his own individual efforts. In this respect there is a decided field for the equipment manufacturer. The same is true in other lines of manufacture.



Cameron Laminating Machine

Illustrated is a three ply laminating machine suitable for latex adhesives for combining various materials as glassene, paper, board, fabric, cellophane, etc. A 60% concentration latex solution is advised. The machine is equipped for belt drive but direct connected motor drive may be furnished. It is built in various widths from 22 to 72 inches. (Cameron Machine Co., Brooklyn, N. Y.)

What has been said about dipped goods applies in even greater extent in the other industries. Textiles, paper, cordage, and the vast number of other industries in which latex is applicable, has a definite use, and an ultimate purpose, are all suffering from lack of equipment—that is, the proper equipment.

The industry is new. The possibilities in latex within the rubber industry and without—and the latter is the largest field—are not yet known. But this is evident—that the equipment manufacturer who is alive to the possibilities before him, has a ready market for latex machinery, properly designed for the purpose intended. And the manufacturer, or potential manufacturer, of latex products is now ready for such a market.

Descriptions of New and Improved Rubber Machinery and Equipment

Gordon Two-Stage Plasticator

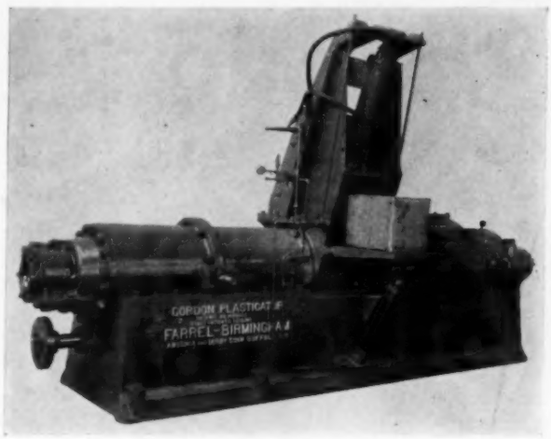
THE latest development in Plasticators is the 20-inch Straight Line, Two-Stage machine illustrated here. The design is the result of five years of steady development, during which time each new machine has shown superiority over preceding ones, but the straight line type of machine embodies a number of new features.

One of these features is the ability of the 20-inch machine to receive a whole bale of rubber at once, thus saving considerable handling and labor. It produces from 5,500 lbs. to 8,500 lbs. per hour of what is called "first pass" smoked sheet.

While the head of the Straight Line Plasticator is exactly the same as in previous models, the amount of working done in the first stage is much greater. It is for this reason the horsepower will be about twenty per cent greater and that the plasticity will be much better and more uniform.

A bale of rubber, put into the machine by mechanical means is pressed down upon the screw with just sufficient force to enable the latter to bite off chunks of such size as it can push forward into the first stage. There the rubber is passed over the rounded tops of the triple thread screw, again and again, until it reaches a wide groove at the end of this type of screw. Very little forward pressure is generated up to this point, but two plows of special shape take the rubber out of the groove and lift it into the second stage at a pressure of upwards of 1,000

lbs. per square inch. At this point is a two-thread forcing screw which boosts the pressure up to a maximum of 2,500 lbs. per square inch and forces it through the kneading head where the final work of plastication is accomplished.



Gordon Plasticator

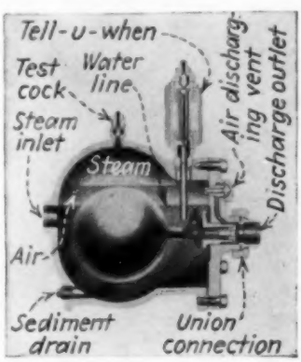
The rotor is carried on very large and heavy roller bearings because of the great necessity of holding it central. The actual loads carried by these bearings are small as compared with their ratings. There is, of course, a very large thrust developed by the forcing action of the second stage screw, and this is taken care of by a large Kingsbury Thrust Bearing especially designed for the machine. It is housed in a rigid, oil-tight chamber with elaborate means provided for keeping out dirt or grit of any kind. The continuous load carrying capacity of this big water-cooled thrust bearing is 600,000 lbs.

The design is equally adapted for slow speed or high speed motor drive. The jack shaft turns at about 100 R. P. M. and is carried on a special all-steel base with a collar-oiling pillow block on each side. It carries a slow speed flexible coupling for connection to a reduction unit or to a slow speed motor. 600 H. P. is required at 600 to 720 R. P. M., or 100 to 120 R. P. M.

The weight of the machine proper is 65,000 lbs., the jack shaft assembly 8,500 lbs., and the 600 H. P. reduction unit 25,000 lbs., or a total weight of 98,500 lbs. (Farrel-Birmingham Co., Inc., Ansonia, Conn.).

Swendeman Steam Trap

The Swendeman model F steam trap illustrated here is the latest type brought out by J. E. Swendeman, Inc., 171



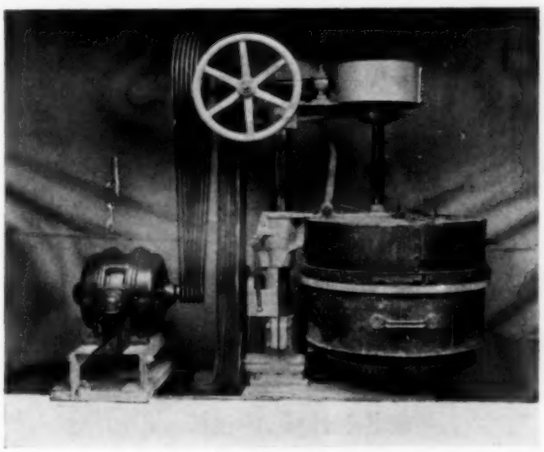
Camden St., Boston, and the manufacturer claims a number of advantages for it over previous types. The three features of the trap are: The "Tell-U-When," a device which indicates at a glance if the valve is wire drawn and wasting steam; the air vent which continuously discharges the air as it comes into the trap, assuring a cure for air-bound conditions; the union connection which permits the replacing of valve and seat in three minutes.

It is stated that with this trap steam lives free from air at all times and prevents waste of steam. It is designed for low and high pressures and all parts are easy of access for examination and repair. It also effects savings in time waiting for equipment to warm up. These traps are rated from 0 to 40 lbs. pressure to 0 to 300 lbs., and are available for pipe sizes from ½ inch to 2 inches.

Lancirick Mixer

The operating principle of the Lancirick Mixer is based upon scientific findings. It is designed to produce a high quality mix, and is suitable for either dry or wet batches. It is particularly adaptable for the mixing of rubber cements or dopes of any consistency.

The pan of the mixer slowly revolves in an opposite direction to the travel of the mixing blades, this action producing an ever changing current of the materials to be mixed. Because of the position of the mixing blades and the optional introduction of a roller to produce a kneading



Lancirick Mixer

action, a perfect distribution of the batch components is assured, producing a smooth silky rubber mass free from lumps or unmixed particles of compound. The position of the mixing blades and roller is off center and close to the edge of the pan. They are adjustable and can be fixed to clear the bottom of the pan for any given distance. They are also readily removed to permit easy cleaning.

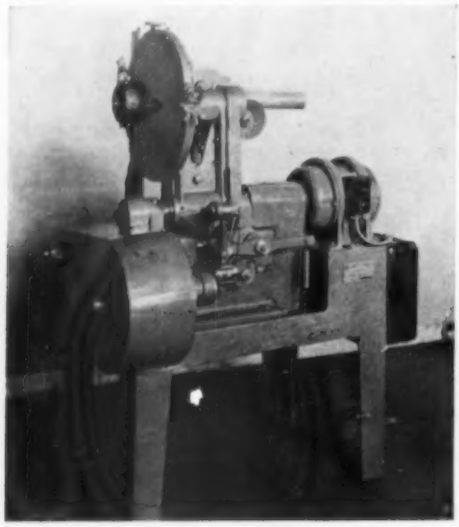
The pan rests on a turntable, keeping its place by weight and contact with lugs to prevent slipping. It is removed by lifting clear of the machine. One pan in reserve can replace the one taken from the machine when the batch is mixed and can be transported to that place in the plant where the batch is to be used.

The Lancirick principle greatly reduces the mixing time, yet distributes all ingredients evenly throughout the batch. This is particularly noticeable where colors are used.

Lancirick Mixers have ball bearing throughout, and are equipped with a V belt drive, or they can be arranged for direct motor drive. (Spadone Machine Company, Selling Agents, 122 East 25th St., New York City).

Thropp Large Washer Cutter

THE Automatic Power Rubber Washer Cutter No. 3 is an automatic machine that cuts rubber washers after they have been cured. This machine also cuts rubber washers in the raw state for filling molds. It will cut round, square, or flat rubber washers from 1½" to 2¾" in diameter. The narrowest width it will cut is 1/16", the largest 1½". It uses a power driven large circular knife, which runs in water revolving between two dies, and a set of feed rollers that feed through these dies. The machine has two different speeds, 80 and 114 cuts per minute. It is very heavy in construction and all the bearings are either hardened or ball bearing. The machine is driven by a direct motor drive with push button control.

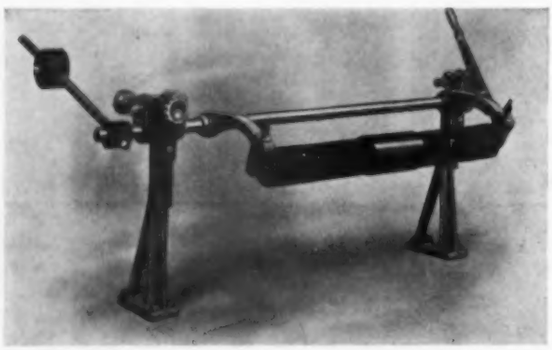


Thropp Washer Cutter

It uses a 2 H. P. motor, weighs 1,000 lbs., and has an overall length of 80¼"; width 41"; and height 55¼". (Wm. R. Thropp & Sons Co., Trenton, N. J.).

The Bristle Wrinkle Boy

THE name "Wrinkle Boy" was adopted because this machine has replaced boys or other hand labor used in so many mills to hold out wrinkles. Not only does this machinery pay for its installation in a very short time, but performs its duty better than is possible with hand labor, state its makers.



Wrinkle Boy

The Bristle Wrinkle Boy is used extensively on surface coated or tacky goods, under rubber spreaders, on oil cloth, artificial leather, waterproofed and oilproofed fabrics, also for removing wrinkles or calender creases on cotton goods. The patent center on this brush prevents the goods from creeping to either side of the machine. (The Bristle Stretcher Co., Mansfield, Mass.).

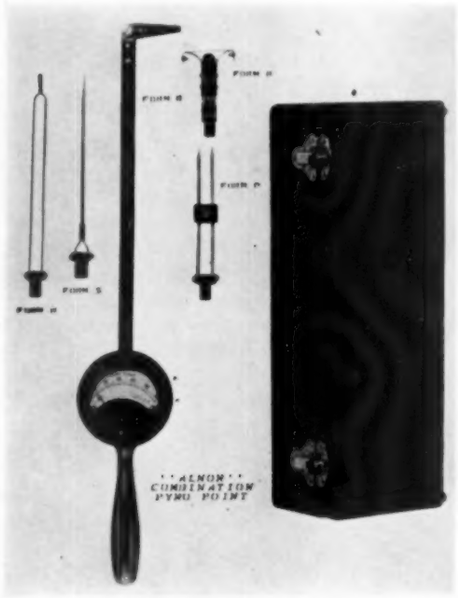
Surface Temperature Pyrometer

In most plants where a surface temperature Pyrometer is required it is usually impossible for one form of thermo-couple to satisfactorily serve all requirements.

A Pyrometer with a thermo-couple designed for one application is often useless for reading surface temperatures of another. A thermo-couple designed for mold or platen use would be of little value for taking the temperature of rolls or cylinders in motion. Likewise, a thermo-couple designed for taking temperatures of bearings or other similar metal surfaces, could not be used for taking temperatures of rubber, or tires or other non-metallic surfaces.

Prior to the development by Illinois Testing Laboratories, Inc., 141 W. Austin Ave., Chicago, of the "Alnor" Combination Pyro Point Contact Pyrometer it was often necessary to have two or more surface type pyrometers to serve for the various requirements found in the rubber plant, paper mill or fabric plant.

With the "Alnor" Pyro Point as many as five entirely different styles of thermo-couples can be used with the same instrument: Prod Type for metallic surfaces such as bearings; Mold Type for either metallic or non-metallic surfaces such as molds, platens, etc.; Needle Point Type for tires, rubber or similar material where temperature under the surface is desired; Ribbon Type for revolving rolls or cylinders; Welded Type for taking temperatures of liquids, gases or any similar application.



Surface Temperature Pyrometer
With Carrying Case

The "Alnor" Pyro Point is a self-contained instrument weighing only about two pounds with thermo-couple. It has a removable arm which supports the thermo-couple. This arm can be revolved 360° and the thermo-couples can be attached or adjusted to one of several angles, thus making it possible to read temperatures in crevices or openings not possible otherwise.

Gas Fired Steam Generators

SMALL rubber factories requiring limited quantities of steam for occasional purposes or large plants with a need for quick steam in various departments will find the gas fired steam generators made by the Syracuse Steam Generator, Inc., South Ave. & Grant Place, Syracuse, N. Y., of interest. Two general types are available, the "Ideal" flueless model, and the "Clincher" flue boiler in sizes from ¼ to 5 H. P. for the former and 1½ to 7½ H. P. for the latter type.

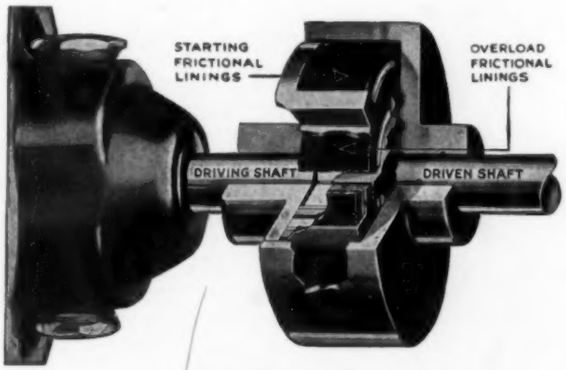
Syracuse Steam Generator

The flueless models are made of 90 per cent copper, making it possible to get up steam in 3 minutes and high pressure steam in 12 minutes. They operate from low to 100 lbs. pressure. The flue type models are of heavy boiler plate construction and can be operated from an ounce pressure to 100 lbs. They are designed for low water return lines. All boilers are inspected, and stamped.

Falk-Rawson Coupling

Illustrated is the new Falk-Rawson 4-Duty Coupling which is said to perform four important duties—it starts, couples, cushions and limits the load.

It makes possible important savings in electrical equipment—motors and controls—protects the machine or the product being made by affording smooth gradual starting and cushioning of overloads. It frequently cuts electrical bills by reducing inrush current and allowing the selection of smaller motors, operating closer to their maximum capacities. In addition, it eliminates the need of shear pin couplings and fulfills the functions of a flexible coupling.



Four-Duty Coupling

The primary function of the Falk-Rawson Coupling is as an automatic starter, centrifugally operated. It accomplishes this function in extremely simple fashion. Essentially, the construction involves merely two drum-shaped members, one attached to the driving shaft and the other to the driven shaft. Between driving and driven members are inserted two sets of floating segments, made usually of brake lining reinforced with lead; the amount of lead being calculated to give the required centrifugal pressure for carrying the load.

The outer segments are actuated by the driving member and the inner by the driven member. The two give just the right combination of smooth starting and overload protection. (Falk Corp., Milwaukee.)

Screw Micrometer Gage for Rubber Specimens

IN RESEARCH Paper No. 549, published in the May number of the Bureau of Standards *Journal of Research*, the use of screw micrometers in place of dial gages for measuring the dimensions of soft rubber test specimens is discussed, and three types of screw micrometer gages which are being used for this purpose are described. The difficulty in determining the point at which the spindle and anvil are just in contact with a soft specimen is overcome in these gages by the use of electrical contacts and a suitable indicating device. By this means the compression of the rubber during the gaging process has been reduced to a point where measurements can be made with a precision of about 0.0002 inch. Comparative figures are given showing the dimensions of soft rubber parts measured with micrometer gages, dial gages, and where possible, computed from volumes. The time required to make measurements with the micrometer gage is somewhat greater than with the dial gage. The advantage lies in the inherent accuracy of the screw and the fact that the compression of the material at contact points is greatly reduced.

Transparent Dipped Rubber Goods

A NEW diffusion method for manufacturing transparent hot-vulcanized dipped articles from latex concentrates is described by the well-known rubber expert Dr. R. Dittmar, Graz, according to the Berlin correspondent of *Chemical and Metallurgical Engineering*, in a recent issue. Jatex, a concentrate obtained by centrifuging latex (E.P. 219,635, 1923) which after evaporation to 40 per cent gives a film as clear as glass, is used as dipping fluid. The articles are dipped at 40 deg. C. followed by vulcanization in a bath made by dissolving 100 grams or more of the finest sulphur in 1000 c.c. benzol. Part of the sulphur remains on the bottom of the vessel and maintains saturated solution when the temperature goes up, and as sulphur is taken up during the vulcanization process. To promote the reaction is used an addition of 20 grams Vulcafor ZDC (zinc di-ethylene carbamate). A dip from 6 to 12 sec. in this solution is used, followed by vulcanization for 30-40 min. at 122 deg. C. This procedure eliminates the mixing and dissolving apparatus, and the arrangement for regeneration of gasoline, required in the hot-vulcanization in gasoline solutions. The use of Jatex and the elimination of added activators and protective colloids result in a perfectly transparent film of extra long life.

Preparation and Crystallization of Pure Ether-Soluble Rubber Hydrocarbon

RUBBER hydrocarbon from latex has been purified at the Bureau of Standards, Washington, D. C., by a method which involved the use of trypsin to remove protein absorbed on the rubber particles. The natural anti-oxidants which always occur in crude rubber were used to protect the rubber during purification. The ether-soluble portion of the purified rubber was crystallized from dilute solutions at low temperatures. A special apparatus was devised for the microscopical examination of the crystalline hydrocarbon. By its means, the growth of crystals was witnessed, and the melting point and refractive indices were determined.

The crystals are spherulites composed of many fine needles. They have a consistent melting point at approximately 10° C. The refractive indices are ϵ=1.535 and ω=1.583 at —5° C. The index of the melted crystals is 1.525 at 11° C. Assuming that the molecule contains no more than 100 carbon atoms and that the crystals are a single substance, ultimate analysis indicates that the composition is $(C_5H_8)x$.

Details of this investigation are published in Research Paper No. 544 in the April number of the Bureau of Standards Journal of Research.

Market for Rubber Toy Balloons in Belgium

TOY rubber balloons—used chiefly for advertising purposes—find a ready sale in Belgium states Henri Turcot, Canadian Trade Commissioner, in the April 24, 1933, issue of Canadian Trade & Commerce. Only one Belgian plant is engaged in the manufacture of balloons, but this concern, besides effecting fairly substantial shipments abroad, appears to enjoy a veritable monopoly of the domestic market. Current prices, f.o.b. works, of the Belgian made article are as follows, Belgian francs being converted into Canadian currency at par:

Prices of Toy Balloons per Gross

Circumference when fully inflated	Plain	Printed on One Side	Printed on Two Sides
20 inches	$1.10	$1.55	$1.69
24 "	1.27	1.72	1.89
28 "	1.63	2.14	2.30
32 "	1.82	2.35	2.50
36 "	2.17	2.78	3.00
40 "	2.60	3.40	3.61
44 "	3.64	4.42	4.61
52 "	4.88	5.89	6.05
60 "	6.20	7.28	7.58
70 "	9.40	11.00	11.40

With valves the price is $0.55; with cardboard tubes, $1.10; and with wire supports, $0.97 additional per gross.

Discounts are granted for quantities, as follows: 25 gross, 5 per cent; 50 gross, 7 per cent; 100 gross, 10 per cent; and 200 gross, or over, 20 per cent. Balloons—solely of the round type—offered for sale in Belgium are packed one gross to a carton, the carton being supplied free of charge, in assorted colors of white, red, blue, green, yellow, and orange, or of white, yellow and orange, the latter combination being more particularly designed for advertising.

In the case of balloons of variegated colors, which do not seem to be in great demand, prices as appearing in the above table are increased by 10 per cent. Printing may extend to three lines and comprise a maximum of twenty letters; otherwise, special cuts are required, and they are invoiced at cost price. It is important to note that delivery of the balloons ordered may be spread over a period of six months, purchasers thus being assured of having at all times fresh goods for distribution. Despite this measure of precaution, it is reported that the wastage through pinholes or breakage amounts to approximately 5 per cent.

Terms of payment are as a rule 30 days from end of month, but it is believed that for imported balloons cash against documents on presentation would be quite acceptable. There is a steady demand throughout the year for toy rubber balloons; however, the height of the buying season is from March up to the end of the summer. Orders for the foreign article should be solicited at the latest in January.

The customs duty on toy rubber balloons entering Belgium is 23 per cent ad valorem, while the luxury tax to which they are subject amounts to 9 per cent, this tax applying equally to the locally manufactured article.

Better Smelling Rubber Raincoats

(Continued from Page 154)

ever the odor it should be agreed upon by all the manufacturers lest in the long run it become imperative for stores to stock up wiith coats of as many odors as there were colors in David's coat. And over against that idea the belief of another buyer that manufacturers should use the odorization as a trade mark, each firm having its own particular raincoat odor. Still another old timer in the trade brought up the fact that when wet—as in the subway or crowded buildings—rubber coat odor increased in strength and reasoned that this would, perhaps, occur with the reodorization scents. Therefore, he believed, whatever scent might be used to supplant the rubber odor it should be very faint.

This would suggest, of course, that despite the interest of the buyers, and the antipathy of the buyer public to bad product odors, their elimination might not be so simple, after all. Yet, as the writer is in a position to state with sound authority, the problem of deodorizing or reodorizing raincoats is simple compared to many the synthetic aromatic industry has already solved with such satisfaction that the solution is everywhere taken for granted today. It has, for example, completely abolished the revolting fish oil smell which once characterized all our printing inks; it has taken the sour smell from our smoother coated magazine papers; it has given real leather odor to artificial leather; it has forever ousted the nauseating smell of finishing oils used in wool, silk and other textile products. And at a cost surprisingly low, even negligible. It can and, of course, eventually will do the same for rubber raincoats, and indeed all the increasingly numerous and ingenious products of the whole rubber industry.

Swedish Tariff Rates

Our attention has been called to the fact that the tariff duties on rubber goods in Sweden, as reported in the article "Foreign Tariff Walls Against American Rubber Goods," in our May, 1933, issue, were not correctly given as to tires. The other duties as given were correct. We are advised by the Swedish Consulate General in New York, that the duty on solid tires is .80 crowns per kilogram, 1.20 crowns per kilogram on pneumatics, and .50 crowns per kilogram on inner tubes. The 3.50 crown tax, given in the article mentioned, is an excise tax applied to all tires or parts thereof sold in Sweden, whether manufactured locally or imported from other countries. [EDITOR.]

Editorial Comment

A Word to the Wise

IN AN address in New York the other day on the National Industrial Recovery act, Donald R. Richberg, general counsel of the National Recovery Administration, issued a warning which strikes home to the rubber industry with a directness which is, to say the least, startling. Without comment—as the thoughts expressed by Mr. Richberg speak for themselves—we reproduce the particular section of his address to which we refer.

"There is no choice presented to American business between intelligently planned and controlled industrial operations and a return to the gold-plated anarchy that masqueraded as "rugged individualism." There is only the choice presented between private and public election of the directors of industry. If the privately elected boards of directors and the privately chosen managers of industry undertake their task and fulfill their responsibility, they will end all talk of dictatorships and governmental control of business. But if they hold back and waste these precious hours, if they take counsel with prejudice and doubt, if they fumble their great opportunity, they may suddenly find that it has gone forever."

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Pricking Bubbles

AS AN indication of how the rubber market, both here and abroad, responds to bearish statements—often unauthenticated—two recent instances might be cited. In this country in the middle of June a statement appeared in newspapers, attributed to a prominent tire manufacturer, to the effect that rubber manufacurers were covered with enough rubber for one to two years and that some manufacturers were unloading rubber. This bearish statement was immediately effective in causing a drop in rubber prices of about 50 points. The other instance occurred abroad when, on the same day, a statement was published in a London newspaper to the effect that Sir Philip Cunliffe-Lister, Secretary of State for the Colonies, had been convinced of the folly of rubber restriction. Immediately there was a reduction in the price of rubber and rubber shares.

In both cases an analysis of the situation showed the fallacy in the first instance of the reasoning, and in the latter case of the facts. As C. C. Johnson points out in the *Journal of Commerce* regarding the supply of rubber on hand in this country, consumption in the United States during May amounted to 44,000 tons and during June will be close to 50,000 tons, making a monthly average for the second quarter of the year of over 40,000 tons. At the end of May American manufacturers had on hand or in transit 297,000 tons, which would represent less than 7½ months' supply at the average consumption rate for the second quarter.

Assuming an additional 50,000 tons was held by them in foreign markets, they would be covered for only 8¾ months' supply at their actual consumptive rate for the second quarter. Assuming that the fears that factories will return to a short week, as expressed by the manufacturer, are justified, a decreased consumption to 30,000 tons monthly would, on the basis of the above figures, indicate that manufacturers were covered for less than 12 months' supply and if the monthly consumption figure dropped to an average of 25,000 tons they would have 14 months' supply.

In regard to the London newspaper story, *The Financial News* investigated the report (as published in another paper) and learned that there had been no change in the Government policy on restriction issued on March 19, 1932, when the official statement reported that "under current conditions it was impossible to frame and operate a scheme for the effective regulation of rubber outputs."

So much for the bubbles.

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Latex Development

IN A paper on Industrial Uses of Latex recently presented in England, D. F. Twiss points out that although at one time there was a tendency for prospective users of latex to follow the lines of ordinary methods of dry rubber manufacture it was soon found that latex requires a technique of its own, which when followed enables latex to "find application on a considerable scale in industries which in the past were regarded as quite outside the rubber industry. It is always unsafe to prophesy," continues Mr. Twiss, "but there is a distinct likelihood that the most important lines of development of latex manufactures will be supplementary to rather than competitive with the old established 'heavy' rubber industry."

It is well to keep this thought in mind for the greatest development in latex will probably not be in replacing present methods of manufacture but in using latex as a material with which to enter new fields or industries heretofore not considered as markets for rubber products. To accomplish this most satisfactorily it is best not to depend too much on the older established methods of rubber manufacture but to consider latex as a new material which requires new concepts of handling and manufacture.

CURRENT • NEWS of the Rubber Industry

JULY, 1933

Tire Factories Continue at Full Capacity; Ten Percent Wage and Salary Increase Made

No Let-up in Sight for Two Months in Tire Production Schedules—Mechanical Plants Reported Busy—Salary and Wage Increases Welcomed by Factory Workers

TIRE plants throughout the country continued to operate at peak capacity throughout June and so far this month. Leaders in the industry expect this condition to hold throughout July and August with a let-down shortly thereafter. Other branches of the industry are operating on enlarged scales—particularly mechanical goods manufacturing—but until general construction throughout the country is resumed, little hope is held out for insulated wires, flooring, etc., used in buildings.

Coupled with this great activity, the industry has restored some of the salaries and wages which had been cut in past months with the result that rubber centers like Akron have taken on a holiday air. The wage and salary increases, followed by higher piece work rates, have been made possible, according to the statements which accompanied the increases, by the immediate spurt in business and by the anticipation of a return to normal conditions shortly.

The general letter issued to Goodyear employees on June 14th announcing the increase, was as follows:

"Effective June 15th, all salaries, all hourly rates, and all base rates for Piece Work Operations in the Goodyear rubber factories and offices at Akron, Gadsden and Los Angeles will be increased 10%. This 10% increase will also apply to all Operating and Distribution Personnel in the United States."

This was accompanied by an explanatory note signed by P. W. Litchfield, president, in which he said:

"Early in June, 1929, we began to reduce personnel, expenses and inventories. When the stock market crash came at the end of November, 1929, we had the shortest inventory of raw materials in many years.

"During the past three years we had to continue the reduction of salaries and wages and other expenses to meet changing conditions downward. At the present time we believe the tide has definitely turned for the better in the United States. We have a long position on raw materials and believe that now is the time to make increases in salaries and wages—anticipating that future business will justify this—and thus help to restore purchasing power, which above all else is necessary to bring back normal times."

The reported increases by rubber factories and tire fabric mills follow: Goodyear cotton mills in Georgia and Massachusetts, 10%, June 10th; Goodyear (Akron, Gadsden, Los Angeles), 10%, June 15th; General, 10%, June 15th; Seiberling, 5%, as of June 1st; Firestone cotton mills, Fall River, 10%, June 14th; Goodrich (Akron, Los Angeles, Georgia), 10%, June 15th; Firestone, 10%, June 15th; Mohawk, 10%, June 16th; Denman, increase to Dec. 31st levels, June 16th; Cooper, varying increase, June 16th; Goodyear, increased minimum hourly wage rate for labor to 45 cents for men and 34 cents for women, June 21st; duPont, 10% increase in salaries, July 1st.

Other companies have also made increases but no official announcements have been made.

Rubber Industry Code

At this writing (July 13) the code being drawn up by leaders in the rubber industry for presentation under the terms of the National Industrial Recovery Act has net yet been completely drawn. The committee which has been working on it for several weeks has been conferring with leaders in the industry in Akron, New York and Cleveland and after the necessary changes are made and it appears satisfactory to all factions, it will be submitted to the Board of Directors of the Rubber Manufacturers' Association for final approval before being transmitted to Hugh S. Johnson, National Recovery Administrator.

Hodgman Increasing Space

Construction is being pushed rapidly on two new buildings now being erected by the Hodgman Rubber Company of Framingham, Mass., manufacturers of rubberized fabrics and specialties. These new structures, built on land adjacent to their present plant, will increase manufacturing space by more than a third.

Decision to build was said to be forced by an increased demand experienced during the past few months. It has also been found advisable to concentrate all Hodgman manufacturing facilities at one point, particularly those departments now located at Malden, Massachusetts, which manufacture sporting goods, rubber bands and extruded products.

The new buildings are expected to be completed about September 1, 1933.

OUTSIDE AKRON LABOR BEING INVESTIGATED

Reports that Akron rubber factories were hiring outside labor recently resulted in an inquiry by the City Council. Investigations by the several rubber factories themselves were being made at the same time to determine if outsiders had been giving local addresses to obtain employment.

The inquiry started by the City Council was the result of complaints made by workers that residents of neighboring states had been flooding Akron and after establishing residence for a short time had been hired by the rubber factories. It was found, however, that the factory labor departments had sent out investigators to guard against giving false addresses and that every precaution was being made to protect local help.

EFFORTS BEING MADE TO UNIONIZE RUBBER SHOPS

Acting in the belief that the National Industrial Recovery Act offers them an opportunity to unionize a number of open shop industries, organized labor is trying, according to Akron newspaper reports, to unionize the rubber industry in Akron. A meeting held in the Armory on June 30th was said to have resulted in 800 pledge cards by workers indicating their willingness to join local chapters of a rubber workers union if formed.

Thiokol Rights in Europe

Thiokol Corporation of Yardville (Trenton), N. J., announces that through an arrangement just consummated with the Monsanto Chemical Works, Ltd., of London, England, "Thiokol" will be made available for sale and distribution in Europe.

"Thiokol" is the oil-proof, synthetic rubber which, up to the present, has been manufactured solely in the United States and which is being used extensively in many industries.

The Monsanto Chemical Works, Ltd., is allied with the Monsanto Chemical Works of St. Louis, Mo.

Tire Makers Clash at Textile Code Hearings On Tire Fabric Mills Hours of Operation

Contention of Larger Manufacturers That Limitation of Hours Tire Fabric Mills May Operate Will Create Shortage Opposed by Seiberling Representing Smaller Plants

IN A spirited plea at the Cotton Textile Code hearings in Washington on June 27, Charles A. Stillman, vice-president of Goodyear Tire & Rubber Company, stated that to limit tire fabric mill operations to 80 hours per week, as proposed in the Code, would not enable them to produce enough tire fabric to keep the tire plants of the "big four" operating full time. He asked that such fabric mills be permitted to operate 144 hours a week at the wages and hours of labor set by the code drawn up for the cotton textile industry. Mr. Stillman stated that he spoke for Goodrich, Firestone and U. S. Rubber Company in addition to his own company.

Opposed to this request, Frank A. Seiberling, president of Seiberling Rubber Company, representing a group of smaller tire factories, urged that all tire fabric mills be operated alike—for the big tire manufacturers and the smaller, stating that to permit the large tire factories to operate their fabric mills for 144 hours while the smaller tire plants had to purchase their fabrics from outside fabric mills operating only 80 hours a week, would increase the cost of tire fabric to them at least 6 cents a pound and make the cost of their tires at least 25 cents each more than those made by the larger tire plants.

Produce 50% of Fabric

Mr. Stillman, in his argument, stated that the four companies he spoke for produced 50 per cent of the nation's tire fabric and 70 per cent of the tires. He said that the so-called "big four" was in sympathy with the purposes of the cotton textile code "so far as it relates to hours of labor, working conditions, and wages of employes, and our fabric mills will be glad to co-operate with the textile industry in those matters."

"Even if it should be decided that our fabric mills should be subject to this code, we, who represent more than 50 per cent of the tire fabric production, urge most strenuously that no restriction should be placed on the number of hours per week that the production machinery in the tire fabric industry may be operated," he said.

"We are opposed to the principle of placing limitations upon the extent of use that may be made of productive machinery of any kind. In our view, the imposing of such restrictions is uneconomic and tends to defeat rather than to promote the purpose of the national recovery act."

Restrictions on the fabric plants would mean, he continued, that thousands of textile workers would be prevented from working although their services were urgently needed; that more thousands of tire workers would be thrown out of work for lack of materials, and that the artificial shortage would boost tire prices.

Mr. Seiberling, in his protest, declared: "All we are asking is equal opportunity. It is unfair to put us smaller manufacturers in the position of buying our fabric on an 80-hour week basis while the 'big four' is on a 144-hour week basis." He asked that all tire fabric mills be permitted to operate at full strength until fall. By that time, he said, tire inventories will be back to normal and all could operate on the 80-hour basis without hardship to anyone.

Mr. Stillman later said Mr. Seiberling had misunderstood the request of the four companies for which he spoke. He pointed out that while he specifically asked that the tire fabric plants of the "big four" be exempted from the cotton textile code, he strenuously objected to imposition of any restriction on the number of hours per week during which any tire fabric producing machinery might be used. This, he said, would cover the entire fabric industry, whether owned and operated as a subsidiary of a tire manufacturing plant or independently.

The stand of Mr. Stillman was backed by Russell E. Watson of Johnson & Johnson, manufacturers of surgical sundries, New Brunswick, N. J. Speaking for his concern and its two subsidiary textile mills, the Chicopee Manufacturing Corp., Gainesville, Ga., and the Chicopee Manufacturing Corp., Chicopee Falls, Mass., Mr. Watson objected to limitation of machinery, claiming that it would throw more than 500 persons out of work in the two plants. He also argued that curtailment of machinery operation would substantially increase production costs.

Tire Prices Not Raised

The rumored increase in tire prices, scheduled for July 1st according to reports, failed to materialize. Although raw materials are considerably higher today, compared to a month ago, it is felt in the industry that an increase now is inopportune and that no change should be made until it is found out how much manufacturing costs will increase when the industry is operating under the code being drawn up under the terms of the National Industrial Recovery Act.

Seek to Abate Mold Tax

Hearings were recently held in Akron on the request for an abatement of $16,000 in taxes by the B. F. Goodrich Company on rubber molds. The State Tax Commission taxed the molds but company attorneys claim that the molds should be classified as dies, which are exempt under the Ohio tax laws.

Board of Waste Material Dealers Approve Committee Action on Code

THE National Association of Waste Material Dealers, Inc., at a special meeting of its Board of Directors held in New York on June 30th approved all the preliminary steps that have been taken by its temporary committee under the National Industrial Recovery Act and passed the following resolution:

Whereas, the National Association of Waste Material Dealers, Inc., has been advised by the National Industrial Recovery Administration "that wherever possible counsel for joint action should be appointed in order that the various codes presented within an industry by the various branches be submitted to conference in order that a uniform code for the entire industry can be adopted" and has expressed further the opinion that "it is in this method that the associations can be of most help to the administration," therefore be it resolved, that the Board of Directors of the National Association of Waste Material Dealers, Inc., authorize and approve the drawing up and filing of a code or codes covering all branches of the waste material industry. Said code or codes to be prepared by a coordinating committee representing every branch of the waste material industry. Any code or codes submitted to be approved first by the individual divisions of the Association affected and the final code or codes to be approved by the Board of Directors and the membership at large.

The committee was further authorized to negotiate with other associations in the industry for the purpose of consolidating, if possible, all codes to be presented in behalf of the Waste Material Industry.

The Board of Directors at the above mentioned meeting also authorized the appointment of a committee to cooperate with the Non-ferrous Ingot Metal Institute and the Aluminum Research Institute in the preparation of a code covering the Secondary Metal Industry.

In the consideration of the subject of a code or codes for the waste material industry, the National Association of Waste Material Dealers, Inc., proposes, with the assistance of proper legal advice, to scrutinize and analyze every code submitted either within the industry or by industries representing consumers which in any way affects the interests of those engaged in the Waste Material Industry in order that no code may be approved which places unfair or unequitable restrictions on any branch of the industry.

The Association invites those in the Waste Material Industry who approve of such a program, whether individual concerns or associations to work together in a genuine cooperative effort so that one of the nation's largest industries may not be circumscribed in its activities by restrictions imposed by consumers or producers but may write its own code with due regard for those interests with which it is inter-related.

TRENTON NEWS

Pocono Rubber Cloth Co. is operating with a day and night shift and has orders for South America, England and Canada. William H. King, vice-president of the company, announces that all the former employes have been taken on with additional help also. Pierce-Roberts Rubber Co. is also operating with a night shift.

Murray Rubber Co. announces a 5 per cent increase in wages with a promise of another raise in pay within the next few weeks. The plant is running near capacity with two shifts. All the old employes have been given their jobs back.

C. Dudley Wilson, of Princeton, secretary-treasurer of the Luzerne Rubber Co., Trenton, N. J., who has been confined to Mercer Hospital for some time, is now convalescing at his home. He was operated on at the hospital.

The Lambertville Rubber Co., Lambertville, N. J., recently restored the five per cent wage cut made a year ago.

NEW ENGLAND NEWS

Decision of the Fisk Rubber Corp., Chicopee Falls, Mass., to liquidate its export business has resulted in the resignation of Daniel H. Fenton, president of the Fisk Tire Export Co., Inc., since 1928. Mr. Fenton resigned immediately upon his return from a trip to Europe. He had been connected with the Fisk company in various capacities since 1919.

E. I. du Pont de Nemours & Co. has instituted a tryout of the so-called "employes' representation plan" in its Fabrikoid plant at Fairfield, Conn. It is understood that if the plan works successfully in Fairfield, it will be adopted in other plants of the corporation. Employes were given an opportunity to vote on adoption or rejection of the plan, and agreed to acceptance by a majority of 93 per cent, 425 hands casting ballots. Each department will have a representative in a "works council," with the company represented by an equal number from the executive offices.

Business recovery continues to be apparent among Connecticut plants affiliated with the rubber industry. Farrel-Birmingham, Inc., Ansonia, builder of rubber machinery, has announced an hourly wage increase of 10 per cent for all employes and adopted a 40-hour week, effective July 10.

The H. O. Canfield Co., plumbers' supplies, and the rubber division of Jenkins Bros., both of Bridgeport, have experienced increases in business, and the Norwalk Tire & Rubber Co., Norwalk, is operating on a 24-hour schedule. The H. O. Canfield Co. recently held its annual employes' outing.

Plants of the United States Rubber Co. in Naugatuck, Conn., were closed from June 23 to July 10 for the annual vacation. It was announced that upon resumption of operations 600 additional hands would be employed, bringing the total roster to 2,900.

During the shutdown work was started on the demolition of a tower on the Maple street plant. The tower was to be cut off at the roof level of the main building and interior changes made.

Having been granted a tax abatement for the years 1933 to 1939, inclusive, the Essex Wire Corp., Detroit, Mich., has started preparations for the reopening of its branch plant in Wallingford, Conn., formerly the New York Insulated Wire Co. The factory will employ about 100 hands. Addison E. Holton is president of the corporation. The tax abatement was granted by unanimous vote of citizens at a borough meeting June 27.

Financial News

Sale of Continental Stocks

Following the auction of several blocks of rubber stocks held by Continental Shares, Inc., Cleveland, in June to satisfy a claim of the Chase National Bank of New York, a second auction of additional stocks held as collateral by the Cleveland Trust Co., and Union Trust Co., of Cleveland was postponed on June 27th by the filing of a bond by Continental interests to block the sale.

The auction last month resulted in the sale of 76,000 shares of Goodyear for $2,878,500, at an average of $37.87; 98,400 shares of Firestone for $2,521,000 at an average of $25.62; 65,000 shares of Goodrich for $1,110,620 at an average of $17.08 and 62,368 shares of U. S. Rubber. None of these stocks carried controlling interests. All of these rubber stocks were bought in by Chase National Bank except 10,000 shares of Goodrich which went to an outside bidder.

On July 8, Judge Terrell, of the Common Pleas Court in Cleveland denied the request for the postponement of the stockholders' suit seeking to restrain the two Cleveland banks from selling at auction the assets of Continental Shares, Inc., which they hold as collateral on loans of $12,000,000. At that hearing Frank A. Seiberling testified, at the request of George T. Bishop, president of Continental, that the 218,000 shares of Goodyear held by Cleveland Trust Co. as collateral were "practically a controlling interest." He also said that in his opinion the intrinsic value of the Goodyear stock was $40 a share but that he expected it to go to $75.

Raybestos-Manhattan

Net profits of Raybestos-Manhattan Inc. in April amounted to approximately $24,000 after all charges while sales volume in that month was about $707,000, according to information from the company.

In May sales increased to $900,000 and net profits increased to about $95,000 after all charges. Current schedules indicate a further gain in sales during June with the likelihood that net profits for the month will exceed $100,000.

For the quarter ended March 31, Raybestos-Manhattan reported a net loss of $63,428. There are 676,012 capital shares outstanding.

Firestone Pays Dividend

Directors of the Firestone Tire & Rubber Co. declared on June 24 the regular quarterly dividend on common stock of 10 cents per share payable July 20 to stockholders of record July 5.

The 2,250,000 shares of common stock outstanding will bring the cash distribution to $225,000, Firestone officials said. The 10-cent dividend rate was established in March. It previously had been 25 cents a share.

Firestone Shows Loss

Firestone Tire & Rubber Co. and subsidiaries, including Firestone Service Stores—Six months ended April 30: Net loss after taxes, depreciation, interest, Liberian development expenditures and other charges, $1,576,000. This contrasted with a net profit of $1,639,739, equivalent, after preferred dividend requirements, to 4 cents a share on 2,050,487 common shares for the six months ended April 30, 1932.

F. B. Davis, Jr., president of the United States Rubber Company, announced on June 28 the appointment of the Bankers Trust Company in New York as transfer agent for the company's stock, effective July 1, 1933. Heretofore the company has maintained its own transfer office at its general headquarters, 1790 Broadway, New York, N. Y.

At the recent meeting of the board of directors of the United States Rubber Co., Lewis L. Strauss was elected a member of the finance committee, it was announced on June 16 by Secretary Eric Burkman.

Preferred stockholders of Goodyear Textile Mills Co. of record May 29, 1933, were offered on June 19 the right to exchange their stock for bonds or common stock of the Goodyear Tire & Rubber Co. of Akron.

Each five shares of preferred will be exchangeable for a $500 par value first mortgage and collateral trust 5% bond of the Akron Co., due May 1, 1957; alternative offer is 3 shares of common of the Akron Co. for each share of Textile preferred.

Increased Schedules Continue

Reports from various rubber centers indicate a continuance of the high production schedules of May and June. Tire plants are especially active with practically all working at full capacity. Mechanicals and auto accessories also report excellent business and large production schedules. Insulated wire plants are, however, awaiting the return of large government building operations before increasing production.

Farrel Raises Wages

Beginning Monday, July 10, all hourly wage rates in the Ansonia, Derby and Buffalo plants of the Farrel-Birmingham Company, Inc., were increased ten per cent. The normal working hours now consist of five days of eight hours each, totalling 40 hours. The policy of the company, it is announced, will be to follow this schedule with as little overtime as possible. The night gangs, repair gangs and maintenance department, it is stated, will work on the present hourly schedule, but if practicable, will average not more than 40 hours a week.

The action of the company in increasing the hourly wage rates and adopting a basic 40-hour week, is entirely voluntary. The company, one of the officials stated, was in complete cooperation with the national administration in its efforts to improve industrial conditions and was ready to give whole-hearted support to any movement to help business and reduce unemployment.

Obituaries

Clayton W. Bedford

C. W. Bedford, well-known rubber chemist, engaged in special experimental and development work in the tire division of the B. F. Goodrich Company, died at his home in Akron, Ohio, June 19. Death was caused by complications following an operation for appendicitis.

Mr. Bedford, born in New Windsor, Ill., June 13, 1885, was graduated from the Galesburg, Ill., high school and from the University of Michigan as a chemical engineer in 1907. He taught in the chemistry department there two years, and later was Assistant Professor at Case School of Applied Science in Cleveland.

He went to Akron in 1910 and for eleven years was in the chemical research department of Goodyear Tire & Rubber Company. He joined Goodrich on March 8, 1922, as research chemist, and was made manager of compounding research on August 16, 1926. On January 1, 1932, he was placed on special experimental work, since which time he was one of those responsible for development of the Cushion Wheel, used on the new streamlined Autotram developed by The Clark Equipment Company of Battle Creek, Mich.

He was the author of a number of technical papers on accelerators and vulcanization and co-author with other Goodyear and Goodrich technologists of papers on Halogenated Rubber, Reactions of Accelerators During Vulcanization, Manufacture of Thioureas, Nitroso compounds as Accelerators, Thioureas from Reduced Nitroso Compounds, and others. He was also co-author with Dr. H. A. Winkelmann, of "Systematic Survey of Rubber Chemistry," a bibliography, published in 1923, of the entire literature of rubber chemistry up to that date.

Mr. Bedford was a member of the Rubber Division, American Chemical Society, the American Institute of Chemical Engineers, and the Masonic Order. He also was nationally known as a stamp collector, having held several offices in the American Philatelic Society, in addition to being a member of the Rubber City Stamp Club and The Garfield Perry Stamp Club of Cleveland. For some time he was Editor of "The Shift Hunter's Letters."

He leaves his father, O. C. Bedford, wife Grace, son Lawrence and daughter Ruth, all living in Akron.

Funeral services were held Wednesday, June 21, at Goodyear Heights United Presbyterian Church. Burial was in Mt. Peace.

Three of Mr. Bedford's former Goodrich associates, Dr. Ernest Blaker, physical research, Dr. Webster N. Jones, former general superintendent of the processing division and now head of the engineering department at Carnegie Tech., and Dr. H. A. Winkelmann, former Goodrich research chemist, together with three members of the Rubber City Stamp club were pallbearers.

Caldwell Riggs

Caldwell Riggs, assistant treasurer and a director of the United Carbon Company, died in a Charleston, S. C., hospital June 14, after an illness of several weeks.

Mr. Riggs was born May 6, 1883, at Alma, South Carolina. He attended public schools there, and later was graduated from Marshall College, Huntington. He then entered the banking business, serving as cashier of the Bank of Middlebourne for eight years. He went to Charleston where he took a position with the Charleston National Bank as assistant cashier. During the World War he served overseas with the 25th engineers.

After the war he returned to his position with the Charleston National Bank where he continued until 1923 when he became associated with Oscar Nelson in the manufacture of carbon black and the production of natural gas.

When the United Carbon Company was formed in 1925 with headquarters in Charleston, he was elected assistant treasurer and a member of the board of directors, which positions he held at the time of his death.

Mr. Riggs had a good personality, made friends easily, held an enviable position among business men throughout West Virginia, and was held in high esteem by those who knew him because of his integrity and sterling qualities. He was a thirty-second degree Scottish Rite Mason and Shriner.

Mr. Riggs is survived by his widow, the former Miss Nell Ankrom of Huntington, to whom he was married in 1919; his parents, Granville A. Riggs and Celia Corbly Riggs, who reside at Alma, and Walter Riggs of Montana, and one sister, Mrs. Florence Stathers of Alma.

Claude Coperet

Claude Coperet, a chemist at Goodyear Tire & Rubber Co., died on June 12th in Akron. He was born in France 54 years ago. Surviving are his wife, a daughter, a sister and a brother.

Ross F. Stauffer

Ross F. Stauffer, 31, dispatcher of the production and control department of the Goodyear Tire and Rubber Company, died suddenly on June 14th at his home from a heart attack. He had worked during the day at the plant where he had been employed for 16 years. He was a member of Commodore Perry Commandery, Knights of Malta, and was prominent in Grace Methodist Church. He leaves his wife, Vodia; a daughter, Mary Jane; his mother, Mrs. C. P. Marks; a sister, Mrs. Blanche Rose, and four brothers, Sylvester, Lawrence, William and Clark Stauffer.

A. S. T. M. Meet in Chicago

The American Society for Testing Materials held its thirty-sixth annual meeting in Chicago, June 26-30. Among the committee reports made at that meeting, and which are of interest to the rubber industry, were the following:

Committee D-9 on Electrical Insulating Materials; H. L. Curtis, chairman; J. A. Scott, secretary. Committee D-11 on Rubber Products; H. A. Depew, chairman; A. W. Carpenter, secretary. Committee D-13 on Textile Materials; H. J. Ball, chairman; W. H. Whitcomb, secretary. Committee E-1 on Methods of Testing; W. N. Fulweiler, chairman; R. E. Hess, ex-officio secretary.

In addition to complete reports on the activities of each committee proposed revised methods of tests were given by each group.

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200 ATTEND AKRON GROUP, A. C. S., MEETING

Over two hundred members of the Akron Group, Rubber Division, A. C. S., were present at the annual outing held at the Fairlawn Country Club, Monday, June 19th. The afternoon was spent playing golf, with free beer served at the 19th hole.

Members enjoyed a dinner at the club in the evening, after which a drawing was held. Over 100 prizes were awarded to lucky ticket holders. The following concerns donated the prizes: Akron Chemical Co., Akron Standard Mold Co., American Tire Alliance, American Zinc Sales Co., Anaconda Zinc Oxide Co., Anderson-Prichard Oil Corp., Binney & Smith Co., Columbia Alkali Co., Dreman Rubber Co., Dill Manufacturing Co., Dugan, Campbell & Co., E. I. du Pont de Nemours & Co., Farrel-Birmingham, Inc., Firestone Tire & Rubber Co., General Tire & Rubber Co., The B. F. Goodrich Co., Goodyear Tire & Rubber Co., C. P. Hall Co., Master Tire Corporation, F. F. Myers Co., National Rubber Machinery Co., National-Standard Co., Naugatuck Chemical Co., New Jersey Zinc Co., Republic Rubber Co., Rubber Service Laboratories Co., A. Schraders Sons, Inc., Seiberling Latex Products Co., Seiberling Rubber Co., V. L. Smithers, Inc., St. Joseph Lead Co., C. K. Williams Co.

The following men comprise the executive committee, to whom credit should be given for a very splendid and successful outing: H. A. Bourne, C. A. Carlton, V. L. Smithers, E. B. Babcock, L. G. Peterson, G. Lloyd Allison, H. J. Conroy, I. Iredell, B. C. Dodd, Geo. Lynn, John Roberts, H. P. Schrank, Enos H. Baker.

Heveatex Expands Facilities

The growing demand for latex has made it necessary for the Heveatex Corporation to add 50,000 feet of floor space to their plant at Melrose, Mass. This expansion was designed to assure manufacturers of a constant supply of normal, concentrated and processed latex at all times.

Of unusual interest at this time is the announcement of a new departure by the Heveatex Corporation whereby their specialized facilities and experience are available for working out through all the experimental stages, complete development projects utilizing latex. The completed process is delivered to manufacturers ready to set up for production. For the development of new products or for the improvement of old products, this new arrangement offers exceptional opportunities. Branch offices are maintained at New York, Akron and Chicago.

Adds Wood Flour Division

As the result of the purchase of the assets of the former New England Mills of Manchester, N. H., the Lumber Bi-Products, Inc., 702 M. & T. Building, Buffalo, N. Y., have enlarged their activities by establishing a wood flour division. The Manchester plant covers 6½ acres and has two railroad sidings to accommodate twelve cars of raw material and eight cars of finished product, at the same time. Present production is approximately 1,500 tons per month of various grades. Wood flour is finely pulverized wood, which is refined into several grades and used as a cheap filler in numerous rubber products to replace more expensive ingredients. Mr. M. J. Watson, President, has been associated with the wood flour manufacturing industry since 1920, and is familiar with the grades desired by the diversified industries.

Names in the News

GEORGE HINSHAW, of Goodyear Tire & Rubber Co., was elected chairman of the Akron section of American Chemical Society at the annual meeting of the organization held on June 12th at Portage Country Club. GEORGE OENSLAGER of the B. F. Goodrich Co., is retiring chairman.

Other newly elected officers are: DR. GEORGE LYNN, of the Columbia Chemical Co., vice chairman; ARTHUR CARPENTER, manager of the testing laboratories of the B. F. Goodrich Co., secretary; LEONARD FREEMAN, research chemist of the B. F. Goodrich Co., treasurer; and DR. JOHN STREET, of Firestone Tire & Rubber Co., councilor.

GEORGE E. PRICE, JR., assistant purchasing agent of Goodyear Tire & Rubber Co., was one of the speakers at the annual convention of the National Association of Purchasing Agents held in Boston on June 13th. He saw the end of "hand to mouth" buying. "With a definite uptrend in requirements for production materials, stock positions can be increased accordingly," he told his audience. "Buying can be done further in advance and thus resume a more normal scheduling of requirements from sellers."

DR. H. L. TRUMBULL, manager of chemical research; GEORGE OENSLAGER, research chemist, and W. I. BURT, superintendent of Mill 3 of the B. F. Goodrich Company, recently attended the Silver Jubilee meeting of the American Institute of Chemical Engineers in Chicago. Mr. Oenslager has written a history covering the last 25 years in the rubber industry for the anniversary publication of the organization.

W. ROBBIE, purchasing agent of the Cambridge Rubber Co., Cambridge, Mass., is now with the Stedfast Rubber Co., at the Mattapan, Mass., plant as general purchasing agent for this company and its affiliated factories.

Dr. H. E. Simmons Heads Akron University

The genial secretary of the Rubber Division, American Chemical Society, Dr. H. E. Simmons ("Hank" to his many friends) has been elected to the Presidency of the University of Akron, succeeding Dr. George G. Zook, who becomes United States Commissioner of Education.

Dr. Simmons has been Professor of Chemistry at the University for a number of years during which time he has created the only rubber course in the country. He has secured the cooperation of the local rubber companies in the inauguration of the course in rubber technology and many of the graduates have entered the laboratories of the rubber concerns. Dr. Simmons is a graduate of the institution which he now heads, having entered as a student thirty years ago. He has a host of friends in Akron and throughout the rubber industry, all of whom join with the editors of this journal in wishing him success in his new position.

DAVIS ON COMMERCE ADVISORY COUNCIL

F. B. Davis, Jr., president of U. S. Rubber Company, has been appointed a member of the Committee on Decentralization of Industry of the Business Advisory and Planning Council for the U. S. Department of Commerce. The broad purpose of the Council is to bring business into the closest possible cooperation with Government for the two-fold purpose of first, giving the taxpayers the best departmental service for their money in the form of information of assured public value, and secondly, in providing a sense of direction to business, more particularly in considering the long-range problems to be faced if the industry of this country is to be put back on a sound footing and started forward once more along the pathway of a reasonably assured progress, according to a statement issued by the Department of Commerce on July 5th.

R. F. SNYDER has been transferred from the Public Relations Department of the B. F. Goodrich Company to the sales promotion division and placed in charge of publications, it is announced by P. C. Handerson, director of advertising and publicity.

R. DAVISON, advertising manager of New Jersey Zinc Co., New York, was elected second vice-president of the National Industrial Advertisers Association at the eleventh annual convention held late last month in Chicago. Mr. Davison also presided at one of the sessions of the association.

J. FRANK MOORE, Assistant Sales Manager, and J. C. RUTHERFORD, Advertising Manager, of Pennsylvania Rubber Co., Jeanette, Pa., returned recently after a five weeks' trip during which they visited the more important cities on the Pacific Coast and in the middle west areas in the interests of the company. Sales and advertising conferences were conducted in Seattle, San Francisco and Los Angeles. They also contacted with the more important Pennsylvania dealers in the cities mentioned, as well as in the adjoining territories, obtaining an intimate knowledge of current local distribution problems and presenting helpful tire merchandising advice to the retailers.

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New Rubber Goods

Two New Rubber Developments by du Pont

THE development of Cavalite, a new light-weight water-proof rainwear material, is announced by the Fabrikoid Division of E. I. du Pont de Nemours & Company, Fairfield, Conn. The new material consists of a special rubber compound ap-

Cavalite Raincoat

plied to a pure silk fabric so that the silk is impregnated and the finished product is all one unit. It is an opaque fabric and has the appearance of leather with a silken sheen. Its weight is so light that women's raincoats made of it weigh less than a pound, and a man's coat weighs only 16 ounces.

One of its features is its great flexibility and unusual soft draping qualities. Tests of its wearing qualities conducted over a period of six months showed that it will not crack or chip or become tacky or stick under ordinary wear.

The material is now being featured in women's raincoats in white, red, green and blue, and in men's coats cut along swagger English lines in black, olive and cordovan.

It is expected that it will be seen in the near future in rainwear for boys and girls and for sports coats. The extreme-light weight of the fabric will make it especially adaptable for the popular short hip-length jacket.

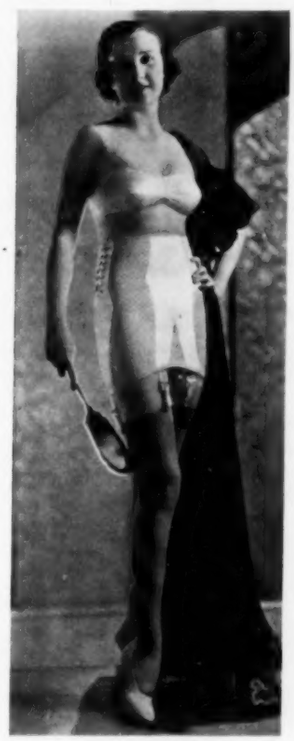
The company states that the material is now being sold to the trade on a special franchise basis, the manufacturers having been selected for their standing in the industry and their ability to turn out well-styled and well-made rainwear.

The other du Pont development is a new type of rubber and silk combination for use in making rubber reducing corsets. The rubber consists of a special compound which is perforated to permit the finished garment to "breathe" and permit the evaporation of perspiration. It is also claimed to be sanitary, and will not injure the most delicate skin in addition to being comfortable to wear.

At present there is an unprecedented world-wide swing to the use of rubber in corsets. Just recently Fifth Avenue shops in New York City advertised corsets made of perforated rubber, imported from England, and priced at more than twenty dollars.

The Paris corsetiere has long known the advantage of rubber as a reducing agent and also as a material for foundation garments. Parision importations are being sold at prices ranging from ten to fifty dollars.

But now American women who choose this common sense and practical way of reducing will be able to buy, for as little as five dollars, a garment high in style and one that they can wear with confidence. The garments are made by the Diana Com-



Perforated Rubber Corset

pany of New York and are being offered by leading department stores and specialty shops throughout the United States.

New Ideal Rubber Dolls

The Ideal Novelty & Toy Co., Brooklyn, N. Y., line of "Tru-Flesh" rubber dolls for 1933 are ready for inspection in their New York showrooms. New ideas have been developed for this year, as well as new costumes and accessories. Honeysuckle, Tickletoes, and Ducky appear in styles that are right up to the minute, and there are also several new and exclusive numbers for spring and summer sale.

RUBBER CONSUMPTION JUMPS 70% IN MAY

Consumption of crude rubber by manufacturers in the United States for the month of May amounted to 44,580 long tons, which is the highest consumption figure for any one month since May, 1929. This compares with 26,226 long tons for April this year, and represents an increase of 70%, according to statistics released by The Rubber Manufacturers Association. Consumption for May, 1932, was reported to be 30,957 long tons. Consumption for first five months of 1933 amounted to 133,398 long tons as compared with 149,449 long tons for same period 1932. Imports of crude rubber for May were 27,556 long tons, an increase of 41.6% over April but 14.5% below May, 1932.

Domestic stocks of crude rubber on hand May 31 were 364,459 long tons, which compares with April 30 stocks of 382,167 long tons. May stocks show a decrease of 4.6% as compared with April of this year, but were 8.2% above the stocks of May 31, 1932. There were 43,342 long tons of crude rubber afloat for the United States ports on May 31 compared with 30,745 long tons afloat on April 30 this year, and 50,453 long tons afloat on May 31, 1932.

May reclaimed rubber consumption is estimated to be 7,770 long tons, production 8,366 long tons, stocks on hand May 31, 13,734 long tons.

DAYTON TO BUILD NEW $100,000 POWER PLANT

Plans for the construction of a $100,000 power plant by the Dayton Rubber Manufacturing Co., Dayton, Ohio, were announced recently by John A. MacMillan, president. The new building launches the second phase of a major expansion program necessitated by the improvement in business conditions.

The announcement follows closely upon the start of the $40,000 warehouse previously announced. The power plant will be one of the most modern power units in the country, according to Mr. MacMillan. It is being constructed to effect economy in production.

CHEMISTS—Going to Rubber Division Meeting in Chicago?

Crowded hotel conditions in Chicago make it imperative that all those who plan on attending the Fall meeting of the Rubber Division, A. C. S., to be held on September 11th to 15th, make their hotel reservations promptly. The Rubber Division meetings will be held at the Stevens Hotel but many of the rubber men are said to be making reservations at the Hotel Sherman, where the rubber banquet will be held on Tuesday, September 12th. Plan now on attending this meeting of the division for it will be one of the most important ever held. Full details of the program are not available yet—but you are assured of an excellent series of papers, according to the division officers. Make your hotel reservation today.

$600,000 OFFER FOR INDIA PLANT APPROVED

Harry L. Snyder, referee in bankruptcy in the receivership of India Tire & Rubber Co., Mogadore, Ohio, ruled on June 30th that the offer of $600,000 for the plant made by a creditor's committee backed by General Tire & Rubber Co., be accepted subject to confirmation by the Federal court. The bid of $500,000 by Mogadore interests headed by W. G. Klauss, former India head, was turned down because of the uncertainty of the deferred payments and the lack of indication that the members of the Mogadore committee are in any way legally bound. This group will, however, be permitted to submit a brief of exceptions before any action by the Federal court is taken. In the meantime the state court receivership will continue and no action is expected until U. S. District Judge Paul Jones returns from a vacation.

Mohawk Gets Refund

The Mohawk Rubber Company, Akron, Ohio, was granted a credit of $20,578 on June 22 by the Bureau of Internal Revenue for overpayment of that amount in the year 1928.

An investigation by field examiners and "consideration of all the relevant facts and circumstances" resulted in a determination that the deduction taken in the return filed for 1928 was understated.

Goodyear Frolic Postponed

The annual outing of Goodyear employees which had been announced for July 14th was early this month, postponed until late in August. It was found that it was impossible to meet July production requirements if the factory was closed down for the outing.

CLAY INDUSTRY FORMS TRADE ASSOCIATION

To bring about consolidated action on the National Recovery Bill, and to cooperate with the Government in the matter of improving the unemployment situation and other matters pertaining to the industrial situation throughout the country, a meeting of the American Clay Association was held June 19th in Philadelphia, at which were present representatives of about 85% of the firms throughout the country in the business of mining, producing, importing, and selling clays of all types used as a raw material in products of many kinds in which clay is an ingredient, including the manufacture of rubber, paper, porcelain, tile, paste, roofing, pottery, terra cotta, refractories, sanitary ware, enameled iron and steel, and a long list of miscellaneous products.

This association is a national organization covering every kind of raw material produced and sold as a clay, including china or white clays, kaolins, ball and plastic clays, refractory clays, bentonite, fullers earth, imported clays, and over a hundred different kinds from as many producing districts.

The meeting authorized drafting of a code for presentation to Washington at once, covering wages, hours of work, and other competitive practices affecting every unit in the industry.

Committees were appointed for immediate action so as to cooperate with the Government authorities with the least possible delay.

By-laws and a code of fair practices were drafted and are being forwarded to General Johnson for approval.

Plans are under way for the immediate organization of additional groups under the national association, in each section, and meetings are now being held so that subcodes can be formulated covering specific problems in each competitive classification or group.

Membership application forms are being sent out by the Executive Secretary, Mr. George A. Fernley, of 505 Arch Street, Philadelphia, Penna., and any producer or firm in the business of marketing any type of clay or mineral so classified should become a member of the national association. George C. Crossley, president of United Clay Mines Corp., Trenton, N. J., is president of the new association.

Raise Funds for Playgrounds

A fund totalling $1,300 has been raised in the General, Goodyear, Firestone and Goodrich plants in Akron for the support of children's playgrounds. The fund is being administered by the Board of Education.

Mechanical Prices Raised

The prices on all mechanical goods made by the B. F. Goodrich Company were increased from 5 to 10% on July 1st, according to an announcement made by President James D. Tew on June 27th. A varying increase was also put into effect by Goodyear Tire & Rubber Company, as of the same date. The price increase is attributed to higher prices on fabrics, rubber and other commodities.

Tire Fabric Mills Get Short Exemption

In the order approving the Cotton Textile Code, on July 9th, President Roosevelt exempted tire fabric mills from the 80 hours of operation per week limitation provision of the code for a period of three weeks. During this period tire fabric mills may operate at capacity of 144 hours weekly so as to meet current demands of tire factories and to accumulate as large a stock of finished fabrics and cords as possible before the shorter period of operation becomes effective on July 30th. The section of President Roosevelt's order relative to tire fabrics is as follows:

"(1) *Limitations on the use of productive machinery shall not apply to production of tire yarns or fabrics for rubber tires for a period of three weeks after this date.*"

This exemption for tire fabric mills is presumably the result of the facts brought out at the recent hearings when Mr. Stillman of Goodyear stated that to curtail hours of operation of tire fabric mills now would cause a shortage of tires, decreased tire factory operation and the throwing out of work of hundreds of plant employees.

It is expected that when these fabric mills become subject to the two forty-hour periods per week at the end of July, the demand for tires will have levelled off somewhat and that the tire industry will not receive as serious a set-back as it would if the fabric mills were forced to curtail on July 17th, when the code as a whole becomes operative.

Tire prices are, of course, expected to increase again shortly, largely as the result of the continued rise in cotton and rubber. P. W. Litchfield warned of such a rise in a radio talk on July 5th and other leaders agree that a boost will be necessary within a few days—probably before this issue of THE RUBBER AGE is off the press.

L. J. SCHOTT CO.
P. O. BOX 124, E. AKRON STAT.
AKRON - - - - OHIO

Buyers of Surplus and Obsolete Rubber Chemicals, Colors, Fabrics, &c.

N. Y. Group to Exhibit New Rubber Products

THE Fall meeting of the N. Y. Group, Rubber Division, A. C. S., scheduled for October 6th, will be devoted exclusively to an exhibition of new and novel rubber goods or applications of rubber, with a number of short talks describing the exhibits. It was felt by the Executive Committee of the Group that an exhibit of this kind would focus the attention of the entire industry on recent rubber developments and possibly lead the way to applications of rubber in other fields.

A list of rubber products which it is desired to include in this exhibit has been prepared and manufacturers are being approached for the loan of such of their products which may be on the tentative list. However, all rubber manufacturers are urged to contribute to this exhibition any of their products which are new and of which little may be known by the industry or the general public. To be of the greatest value, the exhibit must be complete and all manufacturers are asked to cooperate by writing to Mr. Bruce Silver, New Jersey Zinc Co., 160 Front St., New York City, Chairman of the Program Committee, for any further information.

Among the products listed at the present time are such items as rubber bathing suits, printing plates, brightly colored hard rubber, lastex thread, square cut thread, brake lining, dipped footwear, latex paper, "froth" rubber, plioform, doughnut tires, vented inner tubes, tank lining, all-rubber hose, new raincoat materials, sponge rubber products, rubber rope, toys, etc. This list is only a small portion of the products it is expected will be shown but it serves as an indication of the types of articles which will be exhibited.

The complete committee in charge of the program is as follows: Bruce Silver, chairman; J. M. Ball (R. T. Vanderbilt Co.); A. F. Schildhauer (du Pont, Fairfield, Conn.); W. F. Tuley (U. S. Rubber Laboratories, Passaic); C. J. Wright (General Atlas Carbon Co.); W. B. Wiegand (Binney & Smith Co.); P. P. Murawski (du Pont); W. M. Morse (*India Rubber World*); G. D. Kratz (50 Church St., New York City); W. L. Sturtevant (Raybestos-Manhattan, Inc., Passaic, N. J.).

Arrangements for exhibits may be made through any of the members of the committee.

MARKETS

RUBBER—COTTON AND FABRICS—CHEMICALS

NEW YORK, JULY 11, 1933

Crude Rubber

PRICES of crude rubber have fluctuated somewhat since our last report of 6½c on June 8. A low of 5⅜ for the month was reached on June 16 following a bearish statement on consumption and stocks of rubber but since then, there has been a steady rise to the present level of 7½c. The average spot price for June was 6.15 against 4.95 for May. On the exchange, spot prices have risen from 6.32 on June 9 to 7.39 today, with January breaking 8 cents for the first time on July 6. The new Commodity Exchange opened in its new quarters on July 5 and on the next two days records of 1,176 and 1,235 lots were traded. Talk of restriction is still heard but with a rising market there is little likelihood of anything materializing now. Quotations on the outside market and on the New York Exchange and the London and Singapore markets, as of July 11 follow:

Plantations—

Ribbed Smoked Sheets—			
Spot	—	@	.07½
July	—	@	.07½
Aug.-Sept.	—	@	.07⅝
First Latex, crepe spot	—	@	.08¼
Amber Crepe, No. 2	—	@	.06⅝
Amber Crepe, No. 3	—	@	.06¼
Amber Crepe, No. 4	—	@	.06¼
Brown Crepe, Clean thin	—	@	.06¼
Brown Crepe, rolled	—	@	.05⅞

Latex—

Liquid Latex, per gal.	.51	@	—

Paras—

Up-river, fine	.08½	@	.08¾
Acre Bolivian, fine	—	@	.09
Caucho Ball, Upper	—	@	.05

Balata—

Block, Ciudad	—	@	.16

LONDON MARKET

Standard Smoked Sheets—Buyers—July 11

July	—	@	3 19/32d
July Sept.	—	@	3 5/8d

SINGAPORE MARKET

Standard Smoked Sheets—Sellers—July 11

July	—	@	3 5/32d
Oct.-Dec.	—	@	3 9/32d

Reclaimed Rubber

Reclaimers have continued to increase their production schedules to meet the demands of the rubber industry. Difficulty is being experienced in getting scrap rubber in sufficient quantity, but this is expected to be overcome as prices increase. There is an upward tendency in quotations which may soon reach higher levels but only slight changes in prices are quoted over last month. Quotations follow:

High Tensile

High Tensile Red	lb.	.05¾	@	.05½
Super-Reclaim Black	lb.	.05	@	.05¼

Shoe

Washed	lb.	.05¾	@	.06
Unwashed	lb.	.05¼	@	.05½

Tube

No. 1 (Floating)	lb.	—	@	.06½
No. 2 (Compounded)	lb.	.04½	@	.04¾

Tires

Black	lb.	.04	@	.04¼
Black, selected tires	lb.	.04¼	@	.04½
Dark Gray		.05	@	.05¼
Light Gray	lb.	.05½	@	.06
White	lb.	.06½	@	.06¾
Truck, Heavy Gravity	lb.	.05	@	.05¼
Truck, Light Gravity	lb.	.05¼	@	.05½

Miscellaneous

Mechanical blends	lb.	.03¼	@	.03½

Scrap Rubber

Collections of scrap continue to be less than the demand, despite the higher prices which almost all grades command. Reclaimers have greatly increased their schedules and expect to require scrap in larger quantities. Quotations follow:

(Prices to Consumers)

Auto tire peelings	ton	20.00	@	22.50
Mixed auto	ton	10.00	@	11.00
Clean solid truck tires	ton	29.00	@	31.00
Boots and shoes	ton	20.00	@	22.00
Arctics, untrimmed	ton	15.00	@	17.50
Inner tubes, No. 1	lb.	.03¼	@	.03½
Inner tubes, No. 2	lb.	.02	@	.02¼
Inner tubes, Red	lb.	.02¼	@	.02½

Cotton

Spot cotton reached a high of 10.75 on July 10 and is slightly off today. December cotton has, however, reached 11.01 and there is every likelihood of the rise continuing. Average price for spot during June was 9.47 compared to 8.64 in May. Talk of relief from droughts in the cotton states, and the improvement in dollar exchange has recently held prices down but a buying sentiment is in evidence and quotations are expected to continue to rise. Quotations on the N. Y. Cotton Exchange follow:

	June 8	July 11		
	Close	High	Low	Close
July	9.01	10.64	10.47	10.50
October	9.25	10.98	10.79	10.83
December	9.40	11.15	10.96	11.01

Tire Fabrics

(Prices Net at the Mill)

Peeler, carded, 23/4/3	lb.	.29	@	.30
Peeler, carded, 23/5/3	lb.	.28	@	.29
Peeler, carded, 13/3/3	lb.	.24	@	.25
Peeler, carded, 15/3/3	lb.	.26	@	.27
Egyptian, carded, 23/5/3	lb.	.40	@	.41
Egyptian, combed, 23/5/3	lb.	.46	@	—
CHAFERS				
Carded, American, 8 oz.	lb.	.27	@	.28
Carded, American, 10 oz.	lb.	.27	@	.28
Carded, American, 12 oz.	lb.	.27	@	.28
Carded, American, 14 oz.	lb.	.27	@	.28
LENO BREAKER				
Carded, American, 8¼ oz.	lb.	.25	@	—
Carded, American, 10¼ oz.	lb.	.25	@	—
SQUARE WOVEN				
Carded, American, 17¼ oz. 23-11 ply	lb.	.28	@	—
Carded, American, 17¼ oz. 10-5 ply	lb.	.25	@	—

Sheetings

40 inch, 2.50 yard	yd.	.10	@	.10½
40 inch, 2.85 yard	yd.	.09	@	.09¼
40 inch, 3.15 yard	yd.	.10¼	@	—
40 inch, 3.60 yard	yd.	.08⅝	@	—
40 inch, 3.75 yard	yd.	.07¾	@	—
40 inch, 4.25 yard	yd.	.07⅛	@	—

Ducks

Enameling	lb.	.27	@	.29
Belting and Hose	lb.	.28	@	—
Single filling, A grade	lb.	.13¾	@	.14½
Double filling	lb.	.14½	@	.15

Closing Rubber Prices on New York Commodity Exchange, Inc.

No. 1 Standard Contract of 10 Tons

FROM JUNE 9 TO JULY 11

Date		Spot	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Sales
June	9	6.32	6.30	6.32	6.48	6.64	6.80	6.80	6.85	6.90	7.05	7.16	7.26	7.36	——	305
	10	6.43	6.45	6.47	6.60	6.73	6.81	6.88	6.96	7.05	7.14	7.23	7.33	7.43	——	162
	11															
	12	6.30	6.32	6.35	6.46	6.58	6.68	6.77	6.87	6.95	7.02	7.10	7.20	7.30	——	285
	13	6.13	6.17	6.20	6.30	6.40	6.55	6.62	6.72	6.80	6.87	6.95	7.05	7.15	——	356
	14	5.75	5.70	5.75	5.85	5.97	6.10	6.20	6.32	6.37	6.44	6.50	6.58	6.64	——	699
	15	5.48	5.45	5.48	5.61	5.75	5.85	5.94	6.04	6.11	6.18	6.25	6.35	6.45	——	432
	16	5.18	5.12	5.15	5.28	5.41	5.50	5.60	5.70	5.77	5.83	5.92	6.02	6.15	——	884
	17	5.36	5.35	5.38	5.51	5.65	5.75	5.85	5.96	6.05	6.14	6.24	6.32	6.41	——	167
	18															
	19	5.94	5.92	5.95	6.09	6.24	6.34	6.43	6.53	6.67	6.72	6.78	6.85	6.93	——	459
	20	5.75	5.73	5.78	5.90	6.05	6.14	6.22	6.31	6.40	6.49	6.59	6.69	6.79	——	702
	21	6.10	6.06	6.09	6.27	6.45	6.51	6.58	6.66	6.76	6.87	6.99	7.06	7.15	——	584
	22	6.05	6.00	6.03	6.19	6.35	6.43	6.50	6.58	6.67	6.76	6.85	6.93	7.02	——	468
	23	6.12	6.00	6.02	6.16	6.30	6.39	6.49	6.59	6.68	6.76	6.85	6.93	7.02	——	412
	24	6.00	6.00	6.00	6.14	6.28	6.37	6.46	6.56	6.64	6.72	6.80	6.89	6.98	——	150
	25															
	26	6.25	6.27	6.27	6.38	6.50	6.64	6.73	6.82	6.90	6.99	7.09	7.16	7.25	——	512
	27	6.42	6.40	6.40	6.52	6.65	6.76	6.86	6.97	7.05	7.12	7.21	7.29	7.38	——	536
	28	6.38	——	6.36	6.45	6.55	6.65	6.75	6.86	6.95	7.04	7.13	7.20	7.28	——	567
	29	6.50	——	6.40	6.55	6.71	6.79	6.87	6.96	7.06	7.17	7.27	7.33	7.40	——	616
	30	6.32	——	6.26	6.42	6.58	6.68	6.77	6.86	6.96	7.06	7.17	7.25	7.33	——	337
July	1	6.50	——	6.45	6.60	6.75	6.85	6.95	7.07	7.15	7.24	7.34	7.41	7.49	7.57	247
	2															
	3															
	4															
	5	6.81	——	6.67	6.81	6.96	7.06	7.16	7.28	7.36	7.45	7.54	7.61	7.69	7.78	674
	6	7.40	——	7.38	7.54	7.70	7.79	7.87	7.97	8.06	8.15	8.25	8.30	8.35	8.43	1,176
	7	7.62	——	7.55	7.67	7.80	7.92	8.04	8.17	8.26	8.36	8.47	8.55	8.65	8.75	1,235
	8	7.50	——	7.33	7.45	7.58	7.70	7.82	7.94	8.02	8.11	8.20	8.34	8.48	8.58	505
	9															
	10	7.25	——	7.33	7.45	7.58	7.68	7.79	7.92	7.99	8.08	8.18	8.24	8.30	8.40	607
	11	7.39	——	7.40	7.52	7.65	7.78	7.91	8.05	8.10	8.17	8.27	8.37	8.48	8.58	847

Rubber CHEMICAL Markets

NEW YORK, July 11, 1933

ACCELERATORS

Organic

A-1	lb.	.24 @	.27
A-5-10	lb.	.53 @	.56
A-7	lb.	.55 @	.59
A-11	lb.	.62 @	.66
A-16	lb.	.57 @	.61
A-19	lb.	.58 @	.62
A-32	lb.	.90 @	.96
Aldehyde ammonia, crystals	lb.	.65 @	.70
Altax	lb.		
Captax	lb.		
Crylene	lb.	.55 @	.65
paste	lb.	.45 @	.55
Di-Ortho-Tolyguanidine	lb.	.42 @	.43
Diphenylguanidine	lb.	.33 @	.34
Ethylidene aniline	lb.	.45 @	.47½
Formaldehyde aniline	lb.	.37½@	.42
Guantal	lb.	.42 @	.51
Heptene	lb.	.40 @	—
Hexamethylene-tetramine	lb.	.46 @	.47
Lithex	lb.	.18 @	.20
Methylenedianiline	lb.	.36 @	.37
Monex	lb.	3.25 @	—
Oxynone	lb.	.68 @	.80
Phenex	lb.	.50 @	.55
Pipsol X	lb.	3.55 @	4.00
R & H 40	lb.	.40 @	.41
R & H 50	lb.	.40 @	.41
R-2	lb.	1.95 @	2.15
R-2 Base	lb.	4.55 @	5.00
Safex	lb.	1.20 @	1.25
SPDX	lb.	.75 @	—
Super-Sulphur No. 1	lb.		
No. 2	lb.		
Thiocarbanilid, drums	lb.	.25 @	.27
Trimene	lb.	.75 @	—
base	lb.	1.20 @	—
Triphenylguanidine	lb.	.58 @	.60
Tuads	lb.		
Ureka	lb.	.75 @	1.00
Ureka C	lb.	.58 @	.69
Vulcanex	lb.		
Vulcone	lb.		
Vulcanol	lb.		
Z-88-P	lb.	.50 @	.60
Zimate	lb.		

Inorganic

Litharge, domestic	lb.	.05¾@	—
Magnesia, calcined,			
light	per 100 lb.	5.25 @	5.45
heavy	per 100 lb.	3.65 @	3.75

COLORS

Blacks (See Compounding Materials)

Blues

Prussian	lb.	.36 @	.37
Ultramarine	lb.	.26 @	.30

Browns

Sienna, Italian	lb.	.04 @	.08
Umber, Turkey	lb.	.04 @	.06

Greens

Chrome, light	lb.	.23 @	.26
medium	lb.	.28 @	.28
dark	lb.	.28 @	.33
Chromium Oxide, bbl.	lb.	.23 @	.27

Reds

Antimony			
crimson, 15/7	lb.	.40 @	—
sulfur, free	lb.	.52 @	.56
Indian English	lb.	.09 @	.10
Domestic (Maroon)	lb.	.11 @	—
Red oxide, pure	lb.	.10 @	.12
Rub-Er-Red, f.o.b. Easton	lb.	.08¾@	—

Whites

Cryptone CB, No. 21	lb.	.06½@	.06⅔
Cryptone, No. 19	lb.	.06½@	.06¾
Lithopone, Albalith	lb.	.04½@	.04¾
Lithopone, Azolith	lb.	.04½@	.04¾
Titanium oxide	lb.	.17 @	.19
Titanox B	lb.	.06 @	.06½
Titanox C	lb.	.06 @	.06½
XX Zinc Sulphide, bbls.	lb.	— @	.13

Zinc Oxide—American Process

American Azo:			
ZZZ (lead free)	lb.	.05¾@	.06
ZZ (leaded)	lb.	.05½@	.05¾
Horsehead Lead Free Brand:			
Selected	lb.	.05¾@	.06
Special	lb.	.05¾@	.06
XX Red	lb.	.05¾@	.06
XX	lb.	.05¾@	.06
XX Green	lb.	.05¾@	.06
Leaded Brand, Standard	lb.	.05½@	.05¾
Sterling	lb.	.05½@	.05¾
Superior	lb.	.05½@	.05¾
Lehigh	lb.	.05¼@	.05½
U. S. P., bbls.	lb.	— @	.12¾
Kadox, black label	lb.	.09¾@	.09⅞
Blue label	lb.	.08⅝@	.08⅞
Red label	lb.	.07¼@	.07½
St. Joe, black label	lb.	.05¾@	.06
green label	lb.	.05¾@	.06
red label	lb.	.05¾@	.06

Zinc Oxide French Process

Ammonia, lead free	lb.	.05¾@	.06
Anaconda, selected lead free	lb.	.06¼@	.06½
Florence White seal, bbls.	lb.	— @	.10⅞
Green seal	lb.	.09¾@	.09⅞
Red seal	lb.	.08¾@	.08⅞

Yellows

Chrome	lb.	.16 @	.16½
Ocher, dom. med.	lb.	.01½@	.02

BLACKS

Arrow "Aerfloted"			
c.l. f.o.b. works, bags	lb.	.02¾@	—
c.l. f.o.b. works, cases	lb.	.04¼@	—
less c.l. f.o.b. works	lb.	.05¼@	.07
Arrow "Aerfloted" Specification, c.l. f.o.b. wks., bags	lb.	.03 @	—
Bone, powdered	lb.	.05½@	.12½
Carbon, compressed	lb.	.02¾@	.07
uncompressed	lb.	.02¾@	.07
"Certified," Cabot			
c.l. f.o.b. works, bags	lb.	.02¾@	—
c.l. f.o.b. works, cases	lb.	.04¼@	—
less c.l. f.o.b. works	lb.	.05¼@	.07
Spherons	lb.	.02¾@	—
"Disperso" f.o.b. La.	lb.	.028 @	.071
f.o.b. Texas	lb.	.02¾@	.07
Drop, bbls.	lb.	.05½@	.14
"Excello," compressed	lb.	.03 @	—
"Fumonex"	lb.	.03 @	.07
"Gastex"	lb.	.03 @	.07
Lampblack	lb.	.06 @	.08
"Micronex"			
c.l. f.o.b. works, bags	lb.	.03 @	—
c.l. f.o.b. works, cases	lb.	.04½@	—
less c.l. f.o.b. works	lb.	.05¼@	.07
"Supreme"	lb.	.02¾@	—
Thermatomic—"P 33"	lb.	—	—
"Thermax"	lb.	—	—
United, "Dixie" and "Kosmos"			
c.l. f.o.b. works, bags	lb.	.02¾@	—
c.l. f.o.b. works, cases	lb.	.04¼@	—
less c.l. f.o.b. works	lb.	.05¼@	.07
"Velvetex"	lb.	.02½@	.05

COMPOUNDING MATERIALS

Aluminum Flake	ton	21.85 @	24.50
Ammonia carbonate, lump	lb.	.10½@	.12
Asbestine	ton	13.40 @	14.00
Barium carbonate (98-100%)	lb.	.05 @	—
Barium Dust	lb.	.04 @	.06
Barytes southern off-color	ton	10.00 @	18.00
Western prime white	ton	23.00 @	—
Basofor	lb	.04½@	—
Bentonite	lb.	.02 @	.03
Blanc fixe dry f.o.b. works	ton	60.00 @	65.00
Carrara filler	lb.	.01¾@	.02
Catalpo (fact.)	lb.	.02 @	—
Chalk, precipitated			
Suprex white, extra lt.	ton	60.00 @	75.00
heavy	ton	45.00 @	55.00
Clay, Kaolin, domestic	ton	6.00 @	7.00
Aerfloted, Suprex	ton	6.50 @	8.00
Congaree	ton	9.00 @	—
Dark Blue Ridge	ton		
Dixie	ton		
Langford	ton		
Lexington	ton	18.00 @	22.00
Par	ton		
Tensulite	ton	15.00 @	—
Cotton Flock	lb.	.08 @	.16
Glues, extra white	lb.	.15 @	.22
medium white	lb.	.12 @	.14
Kalite No. 1	ton	30.00 @	55.00
Kalite No. 3	ton	40.00 @	65.00
Magnesia, carbonate	lb.	.05¾@	.06
Mica	lb.	.04 @	—
Rottenstone (powdered)	ton	23.50 @	28.00
Soapstone, powdered	ton	16.00 @	18.00
Starch, powdered	cwt.	2.50 @	2.60
Talc, domestic	ton	12.00 @	15.00
Pyrax A	ton		
Whiting, commercial	cwt.	.85 @	1.10
English cliffstone	cwt.	1.50 @	1.70
Sussex	ton		
Witco	ton	20.00 @	—
Zinc Carbonate	lb.	.10½@	—
Zinc Stearate	lb.	.20½@	—

MINERAL RUBBER

Genasco (factory)	ton	30.00 @	43.00
Granulated M. R.	ton		
Hard Hydrocarbon	ton		
Parmr, solid	ton	23.00 @	28.00
Pioneer. MR, solid	ton	40.00 @	42.00
Pioneer-granulated	ton	50.00 @	52.00

SOFTENERS

Acids			
Nitric, 36 degrees	cwt.	5.00 @	5 25
Sulfuric, 66 degrees	cwt.	1.55 @	1.80
Tartaric, crystals	lb.	.20 @	.20½
Acids, Fatty			
Laurex	lb.	.15 @	.16
Stearex	lb.	.08 @	.12
Stearic, double pressed	lb.	.08 @	.12
Alkalies			
Caustic Soda, 76%	cwt.	2.55 @	—
Soda Ash, 58% C.L.	cwt.	1.20 @	1.35
Oils			
Corn, refined, bbls.	lb.	.05½@	.06
Cottonseed, crude		.03½@	.04
Cycline Oil	gal.	.15 @	.28
Degras (c.l. 100 bbls.)	lb.	.02¾@	—
Less c.l. (10-25 bbls.)	lb.	.03 @	—
Lots less than 10 bbls.	lb.	.03¼@	—
Fluxrite	lb.	.05½@	.06¼
Palm Lagos	lb.	.03¼@	.03½
Niger	lb.	.02¾@	.03
Para-Flux	gal.	.17 @	—
Petrolatum, light	lb.	.02½@	—
Pigmentaroil	gal.	.13 @	.18
Pine, steam distilled	gal.	.59 @	.61
destructively distilled	gal.	.56 @	.58
Tackol	lb.	.08½@	.18
Witco Palm Oil	lb.	.07½@	—
Witco Softener (f.o.b. wks.)	lb.	.02 @	—
Resins and Pitches			
Pitch, Burgundy	lb.	.05 @	.06
coal tar	gal.	.05½@	.06
pine, 200 lb. gr. wt. bbl.		6.00 @	—
Rosin, grade K, 290 lb. bbl.		5.50 @	—
Pigmentar	gal.	.18 @	.18
Tar Retort, 50 gal.	bbl.	9.50 @	10.00
Solvents			
Acetone, pure	lb.	.08 @	.09½
Alcohol, denatured,			
No. 1 bbls.	gal.	.30½@	.41½
Benzol, 90%	gal.	.20 @	.22
Carbon, bisulfide	lb.	.05 @	.06
Carbon, tetrachloride	lb.	.05¼@	.06
Dipentene	gal.	.31 @	.41
Dryolene (f.o.b. Okla.)	gal.	.10 @	.10¼
Ethylene dichloride	lb.	.06½@	.07½
Gasoline, steel bbls.	gal.	.16 @	-
Naphtha, solvent	gal.	.26 @	.31
Rub-Sol (f.o.b. Okla.)	gal.	.09 @	—
Turpentine, spirits	gal.	.55 @	—
wood	gal.	.50 @	—
destructively distilled	gal.	.45 @	—
Waxes			
Beeswax, white	lb.	.30 @	.32
Carnauba	lb.	.25 @	.26
Ceresin, white	lb.	.10 @	.11
Montan, crude	lb.	.05 @	.06
Ozokerite, black	lb.	.24 @	.25
green	lb.	.26 @	.30
Paraffin (c.l.—f.o.b. N. Y.)			
Yellow crude scale	lb.	.02⅜@	.03½
White crude scale 124/126	lb.	.02 @	.02½
Refined, 125/127, 138/140	lb.	.03 @	.07

ANTI-OXIDANTS

AgeRite, Gel	lb.		
Powder	lb.		
Resin	lb.		
White	lb.		
Albasan	lb.	.70 @	.75
Antox	lb.		
B-L-E	lb.	.57 @	.60
Flectol A and Flectol-B	lb.	.54 @	.62
Neozone	lb.		
Oxynone	lb.	.68 @	.80
Retardex	lb.	.35 @	.40
Stabilite	lb.	.57 @	.62
Stabilite Alba	lb.	.70 @	.75
VGB	lb.	.55 @	.60

SPECIALTIES

Aromatics- Rodo	lb.		
Sunproof	lb.	.35 @	.37½
Sponge Paste	lb.	— @	.30
Tonox	lb.	.56 @	.60

SUBSTITUTES

Black	lb.	.06 @	.08
White	lb.	.07½@	.12
Brown	lb.	.06½@	.11

VULCANIZING INGREDIENTS

Sulfur Chloride (drums)	lb.	.04 @	—
Sulfur flour,			
Ref'n'd. 100% pure (bags)	cwt.	2.40 @	2.75
Commercial (bags	cwt.	1.75 @	2.10
Telloy	lb.		
Vandex	lb.		

Crude Rubber
Latex and Guayule
Reclaimed Rubber
Tires and Tubes

STATISTICS OF THE INDUSTRY

Rim Production
Automobiles
Gasoline
Cotton Prices

U. S. Imports and Exports of Crude Rubber

YEARS	Gross Imports: Long Tons	Gross Imports: Total Declared Value	Gross Imports: Average Declared Value per pound Cents	Re-exports: Long Tons	Re-exports: Total Declared Value	Re-exports: Average Declared Value per pound Cents	Net Imports: Long Tons
1922	301,076	101,843,188	15.10	4,809	1,921,828	17.84	296,267
1923	309,144	185,060,304	26.72	8,772	5,672,319	28.87	300,372
1924	328,056	174,231,331	23.71	10,309	6,057,637	26.23	317,747
1925	396,642	429,705,014	48.36	14,827	19,847,753	59.76	381,815
1926	413,338	505,817,807	54.63	17,671	22,470,583	56.77	395,667
1927	426,258	339,874,774	35.60	27,775	24,735,488	39.76	398,483
1928	439,731	244,854,973	25.03	32,159	18,128,361	25.17	407,572
1929	560,084	239,178,783	19.15	36,485	16,868,733	20.64	523,599
1930	482,082	139,134,330	12.89	30,205	9,316,205	13.77	451,877
1931	497,138	72,918,949	6.54	25,595	4,255,472	7.42	471,543
1932	409,584	31,936,459	3.47	20,929	2,015,612	4.30	388,655
1931:							
Apr.	44,536	7,712,941	7.73	2,607	528,947	9.06	41,929
May	35,526	5,886,638	7.40	2,501	418,301	7.47	33,025
June	46,233	6,918,900	6.68	2,749	440,604	7.15	43,484
July	43,469	6,023,748	6.19	1,435	223,587	6.96	42,034
Aug.	38,669	5,138,404	5.93	2,324	345,953	6.65	36,345
Sept.	38,494	4,970,324	5.76	1,362	187,431	6.14	37,132
Oct.	41,131	4,803,582	5.21	1,527	203,674	5.95	39,604
Nov.	43,345	4,742,218	4.72	1,403	198,284	6.31	43,345
Dec.	53,536	5,610,120	4.68	2,462	326,382	5.91	51,070
1932:							
Jan.	33,221	3,387,505	4.55	1,524	185,466	5.43	31,697
Feb.	27,959	2,690,250	4.29	1,915	222,584	5.19	26,044
Mar.	45,197	4,251,801	4.19	2,227	240,128	4.84	42,970
April	37,903	3,181,343	3.74	2,128	196,934	4.53	35,775
May	34,182	2,798,914	3.71	1,505	144,561	4.30	32,677
June	40,808	2,647,085	2.89	1,981	134,336	3.02	39,136
July	32,306	2,102,915	2.91	2,030	179,699	3.95	30,276
August	33,449	2,027,045	2.71	1,339	128,952	4.29	32,110
Oct.	35,096	2,436,522	3.10	1,059	98,022	4.13	34,037
Nov.	28,908	2,263,469	3.48	1,745	158,618	4.06	27,163
Dec.	31,384	2,360,061	3.34	770	66,165	3.98	30,614
1933							
Jan.	29,822	2,213,828	3.03	1,403	109,916	3.49	28,419
Feb.	22,603	1,554,086	3.12	1,244	102,129	3.73	21,359
Mar.	27,936	1,867,657	2.98	1,127	86,216	3.42	26,809
Apr.	20,240	1,291,136	2.85	798	70,111	3.92	19,442
May	26,002	1,694,963	2.93	1,842	189,451	4.59	24,894

United States Imports of Guayule, Balata, Jelutong, Liquid Latex

(All quantities in Long Tons)

	Guayule: Tons	Guayule: Dollars	Balata: Tons	Balata: Dollars	Jelutong: Tons	Jelutong: Dollars	Liquid Latex (1): Tons	Liquid Latex (1): Dollars
1924	1,356	536,392	464	568,456	6,165	1,237,100	2,157	864,059
1925	3,781	1,803,448	517	574,750	6,749	1,642,531	3,853	3,537,810
1926	4,305	2,562,096	354	327,218	7,263	3,127,757	3,388	4,680,386
1927	5,018	2,674,957	582	447,246	7,785	2,448,657	1,116	876,077
1928	3,075	1,755,685	731	430,855	7,552	2,540,059	4,167	2,185,579
1929	1,231	545,175	728	566,964	8,203	2,458,136	3,728	1,787,997
1930	1,096	347,388	501	422,684	5,907	1,403,244	4,449	1,506,804
1931	—	—	1,208	411,692	5,777	1,019,010	4,650	884,355
1932	—	—	708	147,403	4,607	616,596	5,085	601,999
1932:								
June	—	—	38	9,483	330	47,077	309	28,800
July	—	—	26	7,934	372	52,116	218	37,327
Aug.	—	—	36	8,885	367	46,926	540	59,178
Sept.	—	—	11	2,261	216	27,265	297	46,380
Oct.	—	—	84	17,451	349	48,816	711	69,053
Nov.	—	—	134	15,983	163	20,296	526	70,785
Dec.	—	—	22	5,209	276	36,298	632	79,250
1933								
Jan.	—	—	33	7,815	357	40,586	841	100,900
Feb.	—	—	12	2,923	391	52,171	367	46,037
Mar.	—	—	45	11,963	437	56,262	539	55,731
Apr.	—	—	7	2,054	210	26,856	794	80,794
May	—	—	35	9,869	463	55,560	734	71,008

(1) Latex import figures not available before 1924. Weight given in pounds of dry rubber contained in latex.

U. S. Consumption of Crude Rubber

(Rubber Manufacturers' Association statistics raised to 100 per cent—All figures in long tons)

Figures on Monthly Basis

	1926	1927	1928	1929	1930	1931	1932	1933
Jan.	32,196	31,518	34,403	43,002	36,194	28,557	27,962	21,661
Feb.	31,136	30,137	33,702	41,594	33,302	28,797	30,011	21,638
Mar.	32,936	36,141	35,688	44,730	35,540	32,788	27,828	18,047
Apr.	32,696	35,871	32,772	47,521	39,686	33,321	25,953	26,226
May	29,364	34,592	37,333	49,233	39,386	37,817	30,597	44,580
June	28,598	33,801	37,676	43,227	34,195	37,916	39,116	—-
July	27,577	29,219	37,407	41,526	29,508	31,937	28,272	—
Aug.	34,533	33,460	42,927	38,274	30,850	27,586	22,372	—
Sept.	32,904	27,214	39,882	34,707	25,515	23,638	22,491	—
Oct.	29,936	26,790	40,857	34,800	27,516	22,277	21,018	—
Nov.	28,080	26,792	37,461	27,659	23,691	22,943	21,910	—
Dec.	26,293	25,492	31,232	23,531	21,687	21,409	16,990	—
Totals	366,149	371,027	441,340	469,804	375,980	348,986	313,122	—

Figures on Quarterly Basis

Quarter	1926	1927	1928	1929	1930	1931	1932	1933
Jan./Mar.	94,301	99,216	103,558	128,565	101,610	89,652	85,309	47,580
Apr./June	87,109	103,242	103,500	139,292	112,229	107,755	92,643	56,092
July/Sept.	93,793	89,210	117,573	113,746	85,261	83,632	72,523	—
Oct./Dec.	83,212	80,860	117,597	84,872	72,020	65,645	64,145	—
Totals	358,415	372,528	442,227	466,475	371,120	346,684	314,620	—

Note—The Rubber Association estimates its monthly rubber consumption figues to be 80 per cent complete. Up until 1925 the quarterly figures were likewise estimated to be 90 per cent complete; beginning with 1925 an estimate of 92 per cent completeness has been used. These estimates have been used in raising the figures in this table to 100 per cent. The quarterly figures are generally regarded as the most authentic; the monthly figures may be accepted as preliminary.

Reclaimed Rubber in the United States

(All Quantities in Long Tons)

Year	Production	Consumption: Tons	Consumption: % to Crude	Stocks*	Year	Production	Consumption: Tons	Consumption: % to Crude	Stocks*
1922	57,834	54,458	19.3	.....	1927	189,144	178,471	47.6	24,980
1923	74,766	69,534	22.7	.....	1928	208,516	223,000	50.4	24,785
1924	80,079	76,072	22.4	.....	1929	218,954	226,588	48.4	27,464
1925	132,930	137,105	35.6	13,203	1930	157,967	153,497	40.8	22,000
1926	180,582	164,500	45.9	23,213	1931	133,351	124,126	33.9	19,257
1932:									
Jan.	8,753	8,440	30.2	18,712	July	5,417	5,131	18.1	16,333
Feb.	8,731	8,332	27.7	18,659	Aug.	3,264	4,382	18.6	14,629
Mar.	8,613	7,420	26.7	19,721	Sept.	5,308	5,235	23.2	14,059
Apr.	5,561	5,555	21.6	21,525	Oct.	6,605	5,494	26.1	13,911
May	5,024	6,070	20.8	18,889	Nov.	6,542	5,234	23.9	14,047
June	5,923	7,031	18.0	16,870	Dec.	5,626	3,968	23.4	15,202
1933:									
Jan.	5,245	4,506	20.8	15,117	July	.....	.....	.....	.....
Feb.	4,530	4,087	18.9	15,403	Aug.	.....	.....	.....	.....
Mar.	3,847	3,454	19.1	15,496	Sept.	.....	.....	.....	.....
Apr.	4,617	4,407	16.8	14,370	Oct.	.....	.....	.....	.....
May	8,366	7,770	17.4	13,734	Nov.	.....	.....	.....	.....
June	.....	.....	.....	.....	Dec.	.....	.....	.....	.....

* Stocks on hand at the end of month or year.
(Rubber Manufacturers' Association figures raised to 100%)

U. S. Consumption of Gasoline

(In Thousands of Barrels of 42 Gallons)

	1931	1932	1933		1931	1932	1933
January	26,844	26,063	26,510	July	39,459	31,317	.....
February	26,133	25,344	23,312	August	39,459	35,207	.....
March	31,037	29,451	28,227	September	36,670	33,645	.....
April	33,400	30,252	30,176	October	35,051	32,255	.....
May	35,716	31,574	33,999	November	30,640	30,294	.....
June	38,375	38,766	.....	December	30,529	27,191	.....

Daily Spot Closing Prices of Ribbed Smoked Sheet Rubber—*New York Market, in Cents per Pound*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Ave
1931																																
April	6⅝	6⅝	—	—	—	6⅝	6⅝	—	—	6⅝	6⅝	—	6⅝	6⅝	6⅝	6⅝	6⅝	6⅝	6⅝	6⅝	6	6⅝	6	6	6	6	6	6	6	6	—	6½
May	6	6	—	—	—	6¼	6⅜	—	—	6¼	6⅜	—	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	—	—	6⅜
June	6⅜	6⅜	—	6⅜	6⅜	6⅜	—	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	—	—	6⅜
July	6⅜	6⅜	—	6⅜	6⅜	6⅜	—	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜	6⅜
August	5⅝	5⅝	—	5⅝	5⅝	5⅝	—	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝	5⅝
September	5⅛	5⅛	—	5⅛	5⅛	5⅛	—	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛
October	4⅝	4⅝	—	4⅝	4⅝	4⅝	—	4⅝	4⅝	5	5	5	5	5	6	6	5	5	5	5	5	5	5	5	5	4⅞	4⅞	4⅞	4⅞	4⅞	4⅞	4⅞
November	4½	4½	—	4½	4½	—	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4½	—	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	—	—	—	—	—	—	—	—
December	4⅜	4⅜	—	4⅜	4⅜	—	4⅜	4⅜	—	4⅜	4⅜	—	4⅜	4⅜	4⅜	—	4⅜	4⅜	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛
1932																																
January	—	4⅜	—	4⅜	4⅜	—	4⅜	4⅜	—	—	4⅜	4⅜	—	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	—	4⅜
February	—	4⅜	—	4⅜	4⅜	—	4⅜	4⅜	—	—	4⅜	4⅜	—	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	4⅜	—	4⅜
March	3	3	—	3	3	—	3	3	—	—	3	3	—	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	—	3
April	3	3	—	3	3	—	3	3	—	—	3	3	—	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	—	3
May	3	3	—	3	3	—	3	3	—	—	3	3	—	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	—	3
June	2⅞	2⅞	—	2⅞	2⅞	—	2⅞	2⅞	—	—	2⅞	2⅞	—	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	—	2⅞
July	2⅞	2⅞	—	2⅞	2⅞	—	2⅞	2⅞	—	—	2⅞	2⅞	—	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	—	2⅞
August	3⅛	3⅛	—	3⅛	3⅛	—	3⅛	3⅛	—	—	3⅛	3⅛	—	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	—	3⅛
September	4⅛	4⅛	—	4⅛	4⅛	—	4⅛	4⅛	—	—	4⅛	4⅛	—	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	—	4⅛
October	3⅝	3⅝	—	3⅝	3⅝	—	3⅝	3⅝	—	—	3⅝	3⅝	—	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	—	3⅝
November	3½	3½	—	3½	3½	—	3½	3½	—	—	3½	3½	—	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	—	3½
December	3¾	3¾	—	3¾	3¾	—	3¾	3¾	—	—	3¾	3¾	—	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	3¾	—	3¾
1933																																
January	—	3⅛	—	3⅛	3⅛	—	3⅛	3⅛	—	—	3⅛	3⅛	—	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	—	3⅛
February	—	2⅜	—	2⅜	2⅜	—	2⅜	2⅜	—	—	2⅜	2⅜	—	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	2⅜	—	2⅜
March	3	3	—	3	3	—	3	3	—	—	3	3	—	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	—	3
April	2⅝	2⅝	—	2⅝	2⅝	—	2⅝	2⅝	—	—	2⅝	2⅝	—	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	—	2⅝
May	4⅝	4⅝	—	4⅝	4⅝	—	4⅝	4⅝	—	—	4⅝	4⅝	—	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	4⅝	—	4⅝
June	5⅛	5⅛	—	5⅛	5⅛	—	5⅛	5⅛	—	—	5⅛	5⅛	—	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	5⅛	—	5⅛
July	6¼	6¼	—	6¼	6¼	—	6¼	6¼	—	—	6¼	6¼	—	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	6¼	—	6¼

Average Spot Closing Prices—Ribbed Smoked Sheets

(New York Market)

Average Price per Pound for Years 1910-1929

Year	Cents	Year	Cents	Year	Cents	Year	Cents	Year	Cents
1910	206.60	1914	65.33	1918	60.15	1922	17.50	1926	48.50
1911	141.30	1915	65.85	1919	48.70	1923	29.45	1927	37.72
1912	121.60	1916	72.50	1920	36.30	1924	26.20	1928	22.48
1913	82.04	1917	72.23	1921	16.36	1925	72.46	1929	20.55

Average Monthly Price per Pound Since 1927

Month	1927 Cents	1928 Cents	1929 Cents	1930 Cents	1931 Cents	1932 Cents	1933 Cents
Jan.	38.75	40.25	20.14	15.24	8.34	4.38	3.08
Feb.	38.25	32.75	23.97	15.85	7.70	4.03	2.95
Mar.	41.04	26.82	24.55	15.34	7.71	3.35	3.01
Apr.	40.86	18.97	21.18	14.93	6.43	3.02	3.56
May	40.76	18.99	21.46	14.24	6.49	3.09	4.95
June	37.25	19.59	20.64	12.45	6.35	2.66	6.15
July	34.87	19.40	21.30	11.24	6.37	2.89	—
Aug.	35.12	19.46	20.59	9.96	5.38	3.63	—
Sept.	33.67	18.47	20.37	8.28	5.08	3.84	—
Oct.	34.32	18.83	19.67	8.20	4.87	3.65	—
Nov.	37.58	18.26	16.62	9.01	4.65	3.44	—
Dec.	40.63	17.97	16.12	9.05	4.64	3.24	—
Average for Year	37.72	22.48	20.55	11.98	6.17	3.49	—

London Closing Prices of Ribbed Smoked Sheet

(In Pence Per Pound)

Day	Apr.	May	June	July	Day	Apr.	May	June	July
1	2 1/16	2 3/4	3 1/2	3 11/16	17	—	2 7/8	3 1/32	—
2	—	2 11/16	3 5/8	—	18	2 1/2	2 13/16	—	—
3	2 1/8	2 3/4	3 11/16	3 11/16	19	2 13/16	2 13/16	3 1/16	—
4	2 1/16	2 3/4	—	3 11/16	20	2 13/16	2 13/16	3 1/16	—
5	2 1/16	2 11/16	—	3 11/16	21	2 13/16	—	3 1/4	—
6	2 1/16	2 7/8	3 1/8	3 11/16	22	2 1/16	2 13/16	3 11/16	—
7	2 1/4	—	3 11/16	3 11/16	23	—	2 13/16	3 11/16	—
8	2 1/16	2 13/16	3 1/8	3 11/16	24	2 1/8	3	3 1/16	—
9	—	2 13/16	3 1/2	—	25	2 13/16	3 1/16	—	—
10	2 1/4	2 13/16	3 11/16	3 11/16	26	2 1/16	3 1/16	3 1/8	—
11	2 1/16	2 11/16	—	—	27	2 13/16	3 1/16	3 11/16	—
12	2 1/4	2 13/16	3 5/8	—	28	2 5/8	—	3 11/16	—
13	2 11/16	3	3 11/16	—	29	2 11/16	3 1/16	3 11/16	—
14	—	—	3 1/16	—	30	—	—	3 11/16	—
15	—	2 13/16	3 1/16	—	31	—	3 1/2	—	—
16	—	2 7/8	2 11/16	—					

Average Monthly Price Per Pound

Month	1930 Pence	1931 Pence	1932 Pence	1933 Pence	Month	1930 Pence	1931 Pence	1932 Pence	1933 Pence
Jan.	7.471	4.160	3.052	2.264	Aug.	4.880	2.385	2.654	—
Feb.	7.948	3.823	2.760	2.093	Sept.	4.075	2.524	2.485	—
Mar.	7.595	3.822	2.047	2.099	Oct.	4.023	2.898	2.425	—
Apr.	7.391	3.082	1.876	2.323	Nov.	4.440	2.890	2.518	—
May	6.926	3.035	1.825	2.966	Dec.	4.516	3.115	2.444	—
June	6.195	3.082	1.750	3.392	Average for Year	5.926	3.155	2.434	—
July	5.648	3.048	1.875	—					

Spot Closing Cotton Prices

(Middling Upland Grade—New York Market)

Recent Daily Price Per Pound

Day of Month	May	June	July	Day of Month	May	June	July	Day of Month	May	June	July
1	8.25	9.25	10.30	11	8.95	—	—	21	—	9.40	—
2	8.25	9.25	—	12	8.95	9.45	—	22	8.40	9.35	—
3	8.30	9.10	—	13	8.85	9.40	—	23	8.60	9.50	—
4	8.30	—	—	14	—	9.35	—	24	8.70	9.60	—
5	8.55	9.30	10.25	15	8.70	8.95	—	25	8.55	—	—
6	8.60	9.15	10.50	16	8.65	9.25	—	26	9.00	10.45	—
7	—	9.25	10.30	17	8.75	9.05	—	27	9.15	10.40	—
8	8.40	9.10	10.25	18	8.60	—	—	28	—	10.25	—
9	8.35	9.25	—	19	8.50	9.35	—	29	9.20	10.15	—
10	8.65	9.35	10.75	20	8.25	9.25	—	30	—	10.15	—
								31	9.35	—	—

Average Monthly Price Per Pound

	1930 Cents	1931 Cents	1932 Cents	1933 Cents		1930 Cents	1931 Cents	1932 Cents	1933 Cents
Jan.	17.21	10.27	6.65	6.23	Aug.	12.03	7.21	7.43	—
Feb.	15.62	10.96	6.85	6.05	Sept.	10.85	6.52	6.30	—
Mar.	15.13	10.90	6.86	6.39	Oct.	10.63	6.32	6.30	—
Apr.	16.39	10.19	6.16	7.02	Nov.	10.96	6.44	6.22	—
May	16.43	9.38	5.72	8.64	Dec.	10.02	6.24	6.00	—
June	14.48	9.05	5.22	9.47	Average for Year	13.57	8.56	6.41	—
July	13.10	9.28	5.87	—					

*Exchanges closed due to Bank Moratorium.

World Stocks of Crude Rubber

ON HAND OR AFLOAT TO THE U. S.

At End of	ON HAND 1931	ON HAND 1932	ON HAND 1933	AFLOAT 1931	AFLOAT 1932	AFLOAT 1933	ON HAND AND AFLOAT 1931	ON HAND AND AFLOAT 1932	ON HAND AND AFLOAT 1933
Jan.	209,487	322,860	396,376	56,187	42,234	32,539	265,674	365,094	428,915
Feb.	212,833	322,711	381,794	63,680	51,728	32,898	276,513	373,845	414,692
Mar.	217,804	334,566	390,135	63,133	44,190	29,531	280,937	378,756	419,666
Apr.	228,382	343,099	382,167	56,700	40,387	30,745	285,082	383,486	412,912
May	220,799	346,231	364,459	73,564	50,453	43,342	294,363	396,684	407,801
June	225,536	345,702	.....	69,421	43,079	.....	294,957	388,781	.....
July	234,822	345,927	.....	66,873	37,894	.....	301,695	383,821	.....
Aug.	240,816	357,342	.....	61,469	41,282	.....	302,285	398,624	.....
Sept.	254,324	365,789	.....	62,420	46,188	.....	316,744	411,977	.....
Oct.	273,456	373,823	.....	68,427	40,176	.....	341,883	413,999	.....
Nov.	292,493	377,996	.....	77,443	40,876	.....	369,936	418,875	.....
Dec.	322,826	388,229	.....	53,940	38,360	.....	376,766	426,589	.....

(Rubber Manufacturers' Association figures raised to 100%)

STOCKS IN GREAT BRITAIN

Stocks in London

(No. of Tons in Wharves and Warehouses, including Latex)

At end of	1931	1932	1933	At end of	1931	1932	1933
Jan.	81,093	67,166	36,481	July	81,317	48,842	.....
Feb.	82,265	65,942	37,182	Aug.	81,560	47,079	.....
Mar.	84,736	64,280	40,845	Sept.	79,692	44,942	.....
Apr.	86,831	61,848	40,911	Oct.	76,778	42,327	.....
May	86,683	56,089	41,998	Nov.	73,911	40,606	.....
June	83,071	51,009	.....	Dec.	69,470	37,407	.....

At End of Recent Weeks

	First Saturday	Second Saturday	Third Saturday	Fourth Saturday	Fifth Saturday
1933					
January	37,410	37,361	37,615	36,852	
February	37,188	37,396	37,559	37,603	
March	38,303	38,522	39,400	40,481	
April	40,845	40,498	40,019	40,547	41,234
May	41,478	41,695	41,843	41,969	
June	42,457	42,723	43,361	44,043	
July	43,748	43,319			

Stocks in Liverpool

1932				
November	57,311	57,329	57,021	56,004	
December	55,774	55,311	54,841	54,907	55,056
1933				
January	57,711	52,950	53,183	52,415	
February	52,232	52,434	52,799	52,955	
March	53,850	53,531	53,716	53,692	
April	53,989	54,305	54,762	54,521	54,336
May	55,148	56,139	57,117	56,795	
June	57,560	58,560	59,326	59,272	
July	59,560	59,372			

STOCKS IN PENANG AND SINGAPORE

(Stocks held by Dealers—Quantities in Long Tons)

End of	1930	1931	1932	1933	End of	1930	1931	1932	1933
Jan.	39,727	48,802	48,850	22,525	July	45,459	51,203	17,017	.....
Feb.	44,371	49,283	46,954	21,530	Aug.	48,132	48,971	20,649	.....
Mar.	45,657	49,590	46,591	24,594	Sept.	44,015	47,025	20,415	.....
Apr.	48,473	45,868	39,663	25,460	Oct.	39,930	52,132	23,158	.....
May	44,715	44,278	38,690	29,822	Nov.	41,674	46,497	25,419	.....
June	42,451	47,517	19,770	.....	Dec.	45,963	45,795	25,341	.....

STOCKS IN OTHER CENTRES

End of 1932:	Malaya Mainland	Afloat for Europe	Holland	Colombo	Para and Manaos
Aug.	38,539	21,250	2,625	3,347	5,129
Sept.	36,346	21,040	2,246	2,834	5,823
Oct.	38,125	19,020	2,208	3,219	6,012
Nov.	36,363	21,860	2,229	3,565	5,530
Dec.	40,222	24,430	2,170	3,844	5,552
1933:					
Jan.	38,844	25,080	2,143	4,662	5,676
Feb.	37,323	28,540	2,033	4,210	6,006
Mar.	33,494	26,180	2,183	3,779	5,780
Apr.	33,391	27,710	2,214		5,204
May	32,613				

Rims Inspected and Passed in U. S.

(Tire and Rim Association Reports)

	Total	Per Cent Balloons		Total	Per Cent Balloons
1923	23,140,620	0.6	1928	24,247,182	81.6
1924	21,863,311	19.7	1929	24,141,502	80.3
1925	26,001,664	66.8	1930	17,364,096	80.1
1926	24,199,524	78.8	1931	11,253,800	76.7
1927	19,700,003	79.1	1932	6,004,252	78.7
1932:			1933:		
July	338,725	82.2	January	727,308	79.1
August	221,913	53.8	February	579,789	—
September	197,999	64.5	March	366,755	—
October	237,498	77.7	April	398,318	—
November	454,947	77.5	May	988,083	—
December	558,674	80.0	June	1,015,181	—

U. S. Tire and Tube Statistics

(All Figures Represent Thousands)

AUTOMOBILE CASINGS

Figures for Recent Years

	1925	1926	1927	1928	1929	1930	1931	1932
Production	60,845	61,237	64,439	77,944	68,726	50,965	48,739	40,085
Shipments	59,262	59,002	64,059	74,296	69,395	53,638	48,151	40,260
Inventory[2]	8,142	10,456	10,264	13,624	11,838	9,003	7,775	7,644

Figures for Recent Months

	PRODUCTION 1931	1932	1933	SHIPMENTS 1931	1932	1933	INVENTORY 1931	1932	1933
Jan.	3,675	3,462	2,258	3,744	3,253	2,597	8,957	7,912	7,237
Feb.	3,985	3,871	2,339	3,402	2,553	2,292	9,536	9,172	7,377
Mar.	4,663	3,671	2,038	4,122	2,954	2,092	10,014	9,878	7,290
Apr.	4,944	3,517	3,123	4,932	3,698	3,654	10,031	9,846	6,778
May	5,679	3,820	.....	5,415	4,258	.....	10,312	9,379	.....
June	5,672	5,643	.....	5,572	10,065	.....	10,447	4,999	.....
July	4,926	3,617	.....	5,462	2,404	.....	9,919	6,203	.....
Aug.	3,906	3,089	.....	4,960	2,655	.....	8,896	6,659	.....
Sept.	3,172	2,539	.....	3,932	3,082	.....	8,158	6,096	.....
Oct.	2,974	2,569	.....	2,852	1,799	.....	8,300	6,876	.....
Nov.	2,500	2,304	.....	2,887	1,711	.....	7,919	7,454	.....
Dec.	2,643	1,983	.....	2,781	1,819	.....	7,775	7,644	.....

AUTOMOBILE INNER TUBES

Figures for Recent Years

	1925	1926	1927	1928	1929	1930	1931	1932
Production	82,614	76,618	70,823	80,180	68,829	52,420	48,333	36,801
Shipments	81,004	71,591	72,896	77,127	70,592	54,938	50,021	37,935
Inventory[2]	11,313	16,200	13,692	16,117	12,807	9,999	7,922	6,749

Figures for Recent Months

	PRODUCTION 1931	1932	1933	SHIPMENTS 1931	1932	1933	INVENTORY 1931	1932	1933
Jan.	3,623	3,308	2,093	4,062	3,529	2,535	9,439	7,719	6,197
Feb.	3,916	3,281	2,224	3,400	2,728	2,102	9,921	8,760	6,357
Mar.	4,450	3,502	1,883	3,789	2,636	1,902	10,475	9,448	6,369
Apr.	4,617	3,225	2,853	4,636	3,385	3,051	10,413	9,441	6,189
May	5,413	3,409	.....	5,281	3,867	.....	10,549	8,913	.....
June	5,358	5,279	.....	5,397	9,019	.....	10,504	5,174	.....
July	4,955	2,937	.....	5,831	2,160	.....	9,589	5,975	.....
Aug.	4,435	2,748	.....	5,301	2,503	.....	8,774	6,127	.....
Sept.	3,449	2,601	.....	4,150	3,098	.....	8,095	5,753	.....
Oct.	3,077	2,187	.....	2,813	1,658	.....	8,321	6,214	.....
Nov.	2,443	2,005	.....	2,594	1,578	.....	8,119	6,662	.....
Dec.	2,597	1,779	.....	2,767	1,724	.....	7,922	6,749	.....

(1) **Rubber Manufacturers' Association figures, raised to 100%. The Association estimates its figures to be 75% complete up until 1929 and 80% complete beginning with 1929, and that basis has been accepted when preparing the statistics in this table.**

(2) **Held by manufacturers at end of period indicated.**

Automobile Production

	United States Total	Passenger Cars	Trucks	Canada Total	Passenger Cars	Trucks	Grand Total
1926	4,298,799	3,808,753	490,046	205,002	164,483	40,609	4,503,891
1927	3,393,887	2,938,868	453,019	179,426	146,850	32,556	3,573,313
1928	4,357,384	3,826,613	530,771	242,382	196,737	45,645	4,599,944
1929	5,358,420	4,587,400	771,020	263,295	207,498	55,797	5,621,715
1930	3,355,986	2,814,452	540,534	154,192	125,442	28,750	3,510,178
1931	2,389,730	1,973,090	416,640	82,621	63,477	19,144	2,472,351
1932							
Feb.	117,418	94,110	23,308	5,477	4,494	983	122,895
Mar.	118,959	99,399	19,560	8,318	6,604	1,714	127,277
Apr.	148,326	120,937	27,389	6,810	5,660	1,150	155,136
May	184,295	157,756	26,539	8,221	7,269	952	193,370
June	183,106	160,338	22,768	7,112	6,308	804	190,204
July	109,143	94,705	14,438	7,472	6,773	699	118,611
Aug.	90,325	75,907	14,418	4,067	3,166	901	94,891
Sept.	84,150	64,748	19,402	2,342	1,741	601	86,483
Oct.	48,702	35,107	13,595	2,923	2,361	562	51,857
Nov.	59,557	47,532	12,025	2,204	1,669	535	61,760
Dec.	107,353	86,149	21,204	2,139	1,561	578	109,542
Total	1,370,678	1,135,493	235,187	60,816	50,718	10,098	1,431,494
1933							
Jan.	130,044	108,326	21,718	3,358	2,921	437	133,402
Feb.	106,825	91,492	15,333	3,298	3,025	273	110,123
Mar.	117,949	99,885	18,064	6,632	5,927	705	124,581
Apr.	180,667	153,350	27,317	8,255	6,957	1,298	189,922
May	218,171	184,632	33,539	9,396	8,024	1,372	227,567

Exports of Crude Rubber from Principal Producing Countries

(Long Tons)

	BRITISH MALAYA[1]							DUTCH EAST INDIES[2]							
	Gross Exports	Gross Exports Minus Imports		Ceylon[3]	India & Burma[4]	Sarawak[4]	British North Borneo[5]	Siam[4]	Java & Madura	Sumatra E. Coast	Other D.E.I.	Indo-China[5]	Amazon Valley	All Other[6]	World Total[7]
1923	252,016	70,432	181,584	39,971	6,416	5,705	4,237	1,718	32,930	46,344	57,822	5,067	16,765	7,856	406,415
1924	259,706	108,524	151,182	39,997	7,697	6,699	4,621	2,962	42,446	54,497	80,347	6,688	23,165	9,065	429,366
1925	316,825	158,022	158,803	49,566	10,082	5,424	5,377	5,377	46,757	65,499	120,626	7,881	25,298	13,797	514,487
1926	391,328	151,243	240,085	58,962	9,874	9,155	6,079	4,027	52,186	71,413	121,231	8,203	24,298	16,017	621,530
1927	371,322	182,845	188,477	55,356	11,321	10,923	6,582	5,472	55,297	77,815	142,171	8,645	28,782	15,633	606,474
1928	409,430	149,787	259,643	57,267	10,790	10,087	6,698	4,813	58,848	82,511	121,770	9,548	21,129	10,690	653,794
1929	574,836	163,092	411,744	81,584	11,663	11,077	7,351	5,018	65,990	87,789	134,037	9,696	21,148	6,767	853,894
1930	547,043	133,876	413,167	76,976	10,782	10,309	6,781	4,251	69,755	79,396	115,254	7,665	14,260	5,651	814,241
1931	519,740	125,506	394,234	61,769	8,470	10,451	6,247	4,218	75,952	87,747	116,009	11,696	12,121	3,292	792,203
1932	478,252	92,539	385,713	48,973	3,888	6,960	4,664	3,451	61,312	79,837	85,871	13,883	6,450	1,816	702,818
1932:															
Feb.	42,008	8,008	34,000	4,533	803	696	460	334	4,814	6,011	6,534	1,060	352	203	59,800
Mar.	39,903	6,658	33,245	3,462	284	501	460	217	4,946	6,863	6,299	774	715	77	57,843
Apr.	36,670	4,682	31,988	3,210	365	459	345	130	6,722	6,090	4,935	962	487	99	55,792
May	40,297	5,677	34,620	3,824	304	595	344	118	6,552	6,551	6,012	964	416	278	60,578
June	36,566	5,665	30,901	3,444	359	481	345	166	5,610	7,516	5,507	1,218	394	139	56,080
July	40,723	5,346	35,377	3,501	99	442	400	184	5,779	6,257	6,145	1,233	232	141	59,790
Aug.	39,327	7,371	31,956	4,717	129	506	400	300	4,803	4,882	7,244	1,088	303	49	56,377
Sept.	41,973	8,869	33,104	5,238	122	614	400	340	3,858	6,485	7,664	1,621	315	78	59,733
Oct.	37,931	9,798	28,133	2,945	139	583	350	428	4,022	7,051	8,944	1,147	414	247	54,403
Nov.	40,098	10,072	30,026	4,146	185	683	350	371	4,368	6,250	9,080	809	1,164	156	57,588
Dec.	40,118	10,089	30,029	5,801	367	644	350	406	4,683	7,066	8,594	1,211	824	150*	59,493
1933:															
Jan.	46,590	7,857	38,742	4,602	318	590	350*	305	4,766	5,630	6,729	1,957	554	125*	64,707
Feb.	37,564	6,167	31,397	5,064	304	541	350*	368	4,895	5,119	5,683	895	620	125*	55,361
Mar.	42,059	7,964	34,095	4,827	389	571	350*	304	5,092	6,466	6,900	1,102	995	125*	61,216
Apr.	36,752	7,758	28,994	4,183	272	624	350*	235	5,226	5,969	7,934	1,053*	556	125*	55,521
May	42,902	13,664	29,238	5,434		1,091	350*	359	6,782	7,298	5,728	1,436*		125*	
June	41,411	16,538	24,873	4,621											

(1) Malayan net exports cannot be taken as production, since imported rubber is largely wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 115 tons in 1923, 1,117 in 1924, 3,618 in 1925, 3,263 in 1926, 2,439 in 1927, 1,437 in 1928, 2,670 in 1929, and 1,274 in 1930. (2) Ceylon Chamber of Commerce statistics until 1926; rubber exported as latex is not included—such shipments were equivalent to 18 tons in 1923, 93 tons 1924, 6 tons 1925, 20 tons 1926, about ½ ton in 1927, and 1 ton in 1928, and practically none in 1929, 1930 and 1931. (3) Official statistics. (4) Imports into Singapore and Penang. (5) Exports from "Other D.E.I." are chiefly wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 2,342 tons in 1923, 1,008 tons 1924, 2,239 tons 1925, 44 tons in 1926, 84 tons in 1927, 1,459 tons in 1928, 1,302 tons in 1929, and 2,656 tons in 1930. (6) Calculated from official import statistics of principal consuming countries, viz., United States, United Kingdom, France, Germany, Belgium and Netherlands, and includes guayule rubber. (7) This total includes the third column for British Malaya, "Gross Exports minus Imports," and all the figures shown for the other territories. *Figure is provisional; final figure will be shown when available.

Net Imports of Crude Rubber into Principal Manufacturing Countries

(Long Tons)

	United States[1]	United Kingdom	France (h)	Germany	Canada (ac)	Japan (da)	Italy	Russia (ce)	Australia (cd)	Belgium (d)	Netherlands	Scandinavia (abcdf)	Spain (g)	Czechoslovakia (abcd)	World Total
1919	238,407	42,671	17,685	5,534	6,395	9,753	9,394	75	1,002	3,995	2,771	3,149	2,418	9	343,808
1920	249,530	56,844	13,895	11,390	11,746	5,297	6,123	62	1,815	3,540	5,510	2,292	2,008	567	371,409
1921	179,736	42,087	15,135	21,920	8,124	21,713	3,906	165	1,014	1,705	1,022	1,279	2,245	549	300,629
1922	296,594	11,724	24,352	27,546	9,207	15,984	6,459	2,491	2,643	172	—3,807	1,778	589	567	396,222
1923	301,527	12,700	27,392	18,519	13,277	15,572	8,489	2,986	1,649	2,184	792	2,528	630	1,128	409,178
1924	319,103	—11,550	30,446	22,727	14,299	19,571	9,764	2,346	3,124	2,688	—807	3,178	944	1,370	416,208
1925	385,596	4,061	32,956	33,937	19,633	11,117	11,412	7,088	4,757	2,930	875	3,149	1,155	1,558	520,274
1926	399,981	34,865	34,240	22,775	20,229	18,125	9,809	6,529	9,021	2,498	2,670	4,046	1,299	1,870	617,987
1927	403,472	60,249	34,271	33,892	26,405	20,521	11,381	12,018	9,490	6,482	626	4,224	2,055	2,672	632,788
1928	407,572	4,846	36,498	37,255	30,447	25,621	12,433	15,184	8,430	7,958	2,243	4,418	3,178	3,138	599,771
1929	528,608	122,675	55,098	49,275	35,453	34,284	17,169	11,774	15,586	9,445	3,022	6,440	864	4,650	894,638
1930	458,086	120,069	68,503	45,488	28,793	38,039	18,639	14,387	5,354	10,635	2,924	7,710	2,400	4,468	822,445
1931	475,993	86,170	46,466	39,688	25,261	43,483	10,149	36,671	7,649	11,009	2,220	6,360	2,605	7,717	794,641
1932	393,844	44,086	42,506	45,121	20,917	56,027	14,469	30,637	12,576	9,519	2,851	7,262	4,359	9,444	693,618
1932:															
Feb.	26,428	5,930	2,898	4,356	1,723	6,781	1,189	2,931	758	506	500	708	313	306	55,382
Mar.	43,361	3,585	2,482	3,436	2,588	5,398	1,423	2,745	1,211	721	112	456	359	644	68,521
Apr.	36,326	6,826	2,956	3,737	1,600	3,684	1,088	764	1,549	847	348	474	417	1,259	61,870
May	32,819	1,110	2,277	3,447	1,416	3,917	1,033	3,743	2,048	617	286	707	272	350	51,821
June	39,136	1,853	3,666	3,405	2,834	2,834	1,534	5,291	1,421	449	127	578	196	280	63,604
July	30,494	4,082	3,125	3,380	1,529	2,544	1,116	1,735	624	723	—214	784	258	1,207	51,387
Aug.	32,650	6,671	4,919	4,006	970	3,390	1,615	1,740	751	1,211	—66	611	210	557	59,235
Sept.	26,865	3,942	5,845	3,674	2,770	5,878	971	1,376	625	694	103	534	267	406	54,220
Oct.	34,748	2,927	4,715	4,177	1,207	5,653	510	1,853	569	627	553	537	489	986	59,551
Nov.	27,689	4,950	3,830	3,577	1,593	4,563	1,265	1,481	1,653	1,035	275	489	631	650	53,681
Dec.	31,246	1,182	3,205	4,623	941	5,603	2,103	3,720	745	1,298	348	544	485	2,602	57,645
1933:															
Jan.	29,260	3,277	5,858	4,241	1,189	7,611	3,005	1,558	1,275	1,388	308	640	252	838	60,700
Feb.	22,970	7,102	6,603	4,460	1,175	8,508	994	2,820	2,001	1,670	375	564	132	681	60,055
Mar.	27,348	8,883	6,093	4,425	1,114	6,035	1,604	2,088	1,904	952	282	649	340	688	62,405
Apr.	20,236	7,765	6,308	4,805	555	5,495	2,215		1,580	882	163	606	281	400	
May	24,894	11,085	4,144	4,622	1,704	5,289					—525				

a—Including gutta percha. b—Including balata. c—Re-exports not deducted in monthly statistics. d—Including some scrap and reclaimed rubber. e—Official statistics of rubber imports by Soviet Russia. f—Including Norway, Sweden, Denmark and Finland. g—United Kingdom and French exports to Spain except in years prior to 1925. h—French imports have been reduced 12 per cent in order to eliminate imports of gutta percha and to reduce to basis of net weight. [1]United States imports of guayule are included in this compilation. *Figure is provisional; final figure will be shown immediately it becomes available.